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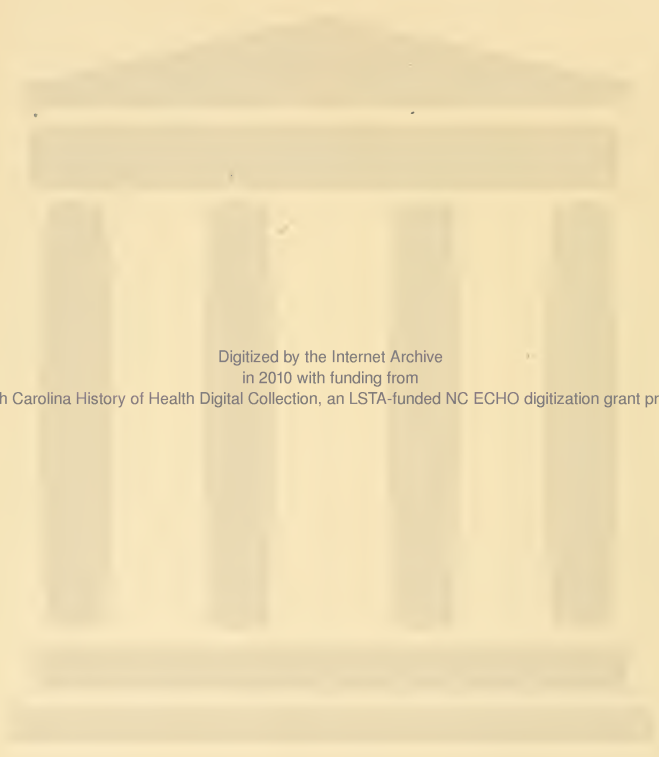
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The Charlotte Medical Journal.

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CHARLOTTE, N. C., JULY, 1902.

No. 1.

Treatment of Typhoid Fever.

By A. A. Kent, Lenoir, N. C.

Of the long category of diseases that we have to combat, enteric fever is admitted to be one of the most serious in many respects. It seems in recent years that it has become more prevalent throughout the country. From every county in the State and from almost every town and community in every county comes up the report of its presence during a considerable part of every year. We are all familiar with it, and recall recent experiences in which our resources, energy and endurance, have been severely taxed in its management. We are just now upon the eve of the season of its greatest prevalence. I can think of no topic of discussion, to which we may devote an hour more profitably than in exchange of views on the treatment of enteric fever.

The subject naturally resolves itself into several minor topics and queries, any of which will afford opportunity for remarks. I shall not exhaust any one of them, but merely open the discussion by taking up such as seemed to me most important, leaving others entirely untouched. I shall then ask you, gentlemen, to make this annual discussion what it was designed to be, a full, free, offhand discussion of a subject of general interest to us all. I cordially invite every one, who feels an impulse to do so, to "speak out in meeting." We are none of us so wise but that we may learn from one another. What you have to say may be just what I, or some one else may need to know. You will not have done your part, if you fail to say it.

Can Typhoid Fever be Aborted?

This is the first query that I propound to you. I will give you my opinion and "the reason for the faith that is in me," and ask you for yours in exchange. I have seen a good many cases abort, or rather, I may say, terminate within fourteen days. But there is no specific treatment that may be relied upon with any degree of certainty to do this. Granted that we have a specific toxemia, as the cause, we should not expect specific results from the use of any medicine, like the definite action observed in a

retort in the chemical laboratory. Some cases, like the summer shower, are quickly over; others like the rainy day, are slow to recover; while yet others, under the same treatment, will terminate fatally. These different results are due in part to the degree of intensity of the specific infection. But are as much due to the *vis naturae* and healthy organism of the individual. One person has the ability to combat, or to eliminate, the toxemia from the system with facility and is but lightly affected. Another person is defective in these respects and is more seriously affected. One case has feeble digestion and a predisposition to gastritis, another has faulty organic structure of the glandular organs, another of the heart or lungs. All these and many other factors, to say nothing of environments, are to be taken into account, and play a more important part in the duration and ultimate termination of any case, than the superiority of any one so-called treatment. When we remember that we have all this diversity of individuality to contend with, we are likely to get better results if we have a like diversity of remedial agents with which to combat the disease.

Specific Medication.

Have we any specific remedies with which we may combat the germs of the disease in the system? I think we have such remedies. I am a firm believer in *intestinal antiseptics* and *elimination*; not according to the Woodbridge formula, but by means of such remedies, given at such times and in such cases, as are best suited to the case in hand. My experience with the Woodbridge treatment in a limited number of cases was not very satisfactory. The *principle* of disinfection and elimination is correct; but I can adapt the treatment to the case in hand, better than to try to follow the formula of another. The remedy that one practitioner gets the best results from may not be so efficient in the hands of another. We do not use them just alike. *Treatment* should be begun with a good dose of calomel, epsom salts, or some vegetable cathartic, sufficient to effectually clear out the alimentary tract. This should be repeated in smaller doses every second or third day, up to the latter part of the second week. After that time I use once a day enemas of warm water in which ten to fifteen drops of spirits of turpentine is dis-

*Read before the North Carolina Medical Society, June 10th, 1902.

solved. If this fail to keep the bowels open, I *still* use some mild purgative. As an *intestinal antiseptic*, I usually give Listerine or Park-Davis' Euthymol, thirty drops in water every three hours. I have obtained satisfactory results from tincture of iodine and carbolic acid, $\frac{1}{2}$ m. of each, well diluted with water, every three hours. In some cases this combination disagrees with the stomach. I have then used carbolic acid alone and found it to agree better. I have some times used Salol, $2\frac{1}{2}$ to 5 grains every three hours, but cannot say that I have been especially pleased with it.

Sulpho-Carbolate of Zinc in five grain doses every four hours has given me very satisfactory results. I have used Thymol in five grain doses, in capsules, every four hours with good results. I should not fail to make honorable mention of the time honored remedy. Spirits of Turpentine, in this list. I regard it as an excellent remedy, given in ten to fifteen drop doses, in emulsion every four to six hours; but preferably used in the form of stupes over the abdomen. The system is in this way easily saturated, as it is readily absorbed. It is well for one to be familiar with the use and action of several of these remedies, for he will often find that the one he may begin with will not be well borne by the stomach, and he will have to change. After a few days use of *some one* of them, with mild purgatives, there is, as a rule, a general amelioration of all the symptoms. The temperature range will be considerably lowered; the tongue cleans and becomes moist; food taken and better digested; tympanitis is prevented; diarrhoea checked; headache and delirium relieved; and the patient rests better. Whether or no any treatment is capable of effecting a germicidal influence upon the bacteriological forms implanted in the deep tissues throughout the organism, is questionable. But it is easy to understand how it destroys, or renders less virulent the bacilli Typhosis, so abundant in the alimentary tract. At the same time, much of this toxic matter is being swept out by the purgatives and enemas before it is absorbed and carried into remote tissues. But after we have done what we may with *Specific Treatment* there are a great many symptoms that must yet be treated upon the *expectant plan*.

Hydrotherapy should rank first in order along the line of expectant treatment. I cannot say much for the cold bath, as it is not easily carried out in general practice; nor would I dare to say much against it, in the face of the great array of statistics in its favor. I will ask some of those present, who have had more experience, how to carry it out safely, if it may be, in general

practice, where the help of trained nurses is not to be had, and where we cannot see our patients oftener than every second day. I use, with much comfort, to my patients, frequently repeated sponge baths when the temperature range is high. I instruct the nurse to sponge the patient all over, as he lies in bed, several times a day with tepid water. If he is weak and much exhausted. I have a little alcohol added to the water. This sponging conduces to the quiet and comfort of the patient, and helps to control the fever and delirium.

High Temperature may be best controlled in hospital practice by systematic cold bathing, but in private practice we cannot carry it out very well, and must resort to other remedies. During the first and second weeks, one or two small doses, three to five grains, each day of phenacetine, or acetanilid may be safely given, except in cases of weak heart. It quiets nervousness, relieves headache, and lowers the temperature for a few hours after each dose. It should not be kept up too long, and should never be given in cases of weak pulse, or where there is extreme exhaustion. In such cases, I have seen large doses, twenty to thirty drops, of Tinct. of Digitalis given every six to twelve hours, slow and strengthen the pulse, reduce the temperature range and relieve tremor and delirium. As Digitalis is cumulative in its effect, the dose should be gradually reduced as its action is observed. If the temperature does not exceed one hundred and three degrees, especially when the morning remission is considerable, it does not *demand* any special antipyretic treatment. I have never been able to get antipyretic effects from the administration of quinine, except in cases of malarial complication. In some cases of prolonged high temperature and delirium a full dose of morphine or pulv. opium at bed-time, will give a quiet night's sleep, slow and strengthen the pulse, and break the course of prolonged high fever.

Diarrhoea and Hemorrhage. Where the patient is properly dieted and intestinal antiseptics used, diarrhoea is the exception and not the rule. I have found bismuth subnitrate, and some form of opium to be the best means of controlling it. I have had very poor results from the use of mineral and vegetable astringents, such as acetate of lead and tannic acid. Intestinal haemorrhage is a very grave symptom and demands a fuller consideration than I give can to it at this time. It is best controlled by perfect quiet in bed, withholding food, and the administration of full doses of opium.

Stimulants as a rule are not needed, especially with young patients, whose previous health and habits have been good.

Alcoholic stimulants should not be given as a matter of course, in a routine kind of way. In old people, and those of feeble constitution, it should be given, but cautiously and systematically, provided it does not irritate the stomach. It should be administered in all cases where there is great general prostration, weak and irregular heart action, and pulmonary complications. Its effects should be observed closely, to make sure it is not interfering with digestion, irritating the stomach, and helping to produce gastritis, a most serious complication. In ordinary cases, one-half oz. of whiskey or brandy every three hours is sufficient. In extreme cases a much larger amount should be given. I have found coffee to be a very good stimulant, especially in cases that are disposed to stupor. It may be given with milk, equal parts of each, thus combining stimulation and nourishment in a form that is easily digested and agrees well. It has the advantage of not having to be repeated at frequent intervals, the stimulating effect lasting from four to six hours. Where continued support of a weak fast heart is necessary tincture of digitalis, ten to twenty drops, every six hours, is the most reliable remedy. It is slow in action, hence its use should not be delayed too long when indicated, and the dose should be reduced, or the interval lengthened, when the pulse has been sufficiently slowed and strengthened. It sometimes disagrees with the stomach, when it does the tincture of *strophanthus* may be given in its stead, three to six drops every four to six hours. It is quicker in its action and of shorter duration, and not altogether so reliable an agent as digitalis. When a very powerful stimulant is needed, there is nothing equal to *strychnia* given hypodermically. It is a valuable tonic and stimulant, given *per orem*, where there is not much tendency to diarrhoea. It should be given in 1-60th to 1-30th grain doses every four hours. It is an invaluable remedy in the slow convalescence from typhoid fever.

Food should be systematically given every six hours during the first week of sickness—every three hours in day time and every four hours during the night, of the second and third weeks. In grave cases where the amount taken at a time is small and prostration extreme, *pre-digested food* should be given every two hours. The amount of food should be regulated by the digestive powers of the individual. I am of the opinion that fever patients are often over-fed, and that much of the gastric indigestion, diarrhoea, tympanites and other bad symptoms are due to over-feeding. Milk is for many reasons the most reliable

article of food. There are many ways in which it may be given. When it disagrees, as it will do in a considerable number of cases, I use soups and broth. The white of egg and water with a little wine or whiskey is usually very well borne and is especially good in cases with very irritable stomach. No solid food should be administered during the sickness, or for more than a week after the temperature has reached the normal. *Rectal alimentation* is of great help in cases of irritable stomach or much nausea and vomiting. A cleansing enema of warm soapy water should first be administered. After it is voided, a nutritive enemata should be given. Inject high up and give no more than four or five ounces of some liquid food that may be easily absorbed, such as liquid peptones, soups, broth, or white of egg and water. Milk is not good, as the lower bowel will not digest it. Stimulant and some kinds of medicines are easily given in this way, provided they are well diluted.

Prophylaxis and Disinfectants.

Remove from the sick room, if it can be done, all the unnecessary furniture, carpets, rugs and bedclothing. Instruct the nurse to open the doors and windows several times a day and air the room well, the patient being protected from draughts by proper covering. The bed linen and clothing used by the patient should be changed every second or third day, sometimes oftener. Too frequent changing disturbs the patient, causing a rise in temperature and sometimes other troublesome complications. The soiled linen, etc., should be dipped in a 1-1000 bichloride solution and then well boiled in washing.

All glasses, spoons, plates, cups, wash bowl, etc., used by the patient should be set apart for the sick room, or thoroughly disinfected in a strong carbolic acid (1-50) or bichloride solution (1-1000) before being used by other persons.

All discharges from the bowels, urine, vomited matter, etc., should be received into a vessel containing a strong disinfecting solution. I ordinarily provide the nurse with bichloride of mercury in 60 gr. powders; and instruct her to use one powder to a gallon of water, kept in a one or two gallon jug. This makes approximately a 1-1000 solution. Some of this solution is to be kept all the time in the chamber mug and other like receptacles. Disinfection of the room after the patient is convalescent is best done with Formaldehyde gas. One pint to the 1000 cubic feet of space should be sprinkled in the room. The room should first be made as near air tight as possible and kept shut for twelve hours after the

formaldehyde is sprinkled in it. Care should be taken that all closets opening into the sick room should be opened for this disinfection.

Good nursing is of paramount importance to both physician and patient. Many a physician has been robbed of his otherwise well earned success by the ignorance or baseness of a bad nurse. It is no unusual occurrence for a bad turn in the patient's case to be caused by some act of officiousness on the part of some meddlesome neighbor. Good nursing means neatness, gentleness, cheerfulness, quietude, hopefulness, comfort, diminished suffering to the patient. To the physician it supplies accurate and systematic administration of medicine and reports of the case in his absence. It requires tact, alertness, intelligence and involves grave responsibilities.

Less Drugs in Typhoid Fever.

It is a very common assertion of old men in the profession, that they use less drugs in the treatment of typhoid fever with their advancing years of experience. This is in part due to a better knowledge acquired by experience of the drugs that are really helpful, and of a better understanding of how to use them. But it is also partly due to their faith in former treatment and methods of treatment being shaken or entirely destroyed by more recent methods of investigation and observation. No *young* practitioner should be misled by this into doing nothing for his patients. He has been employed to do something, to act, to benefit, to relieve, to cure that patient. If he fails to do precisely the right thing at precisely the right time, he is derelict in his duty; and is responsible for any bad results that may follow. He should not be lulled into inactivity with the comforting idea that his patients will probably do just as well with little treatment. He is not in charge of any case of serious sickness as a mere figure-head. He is the representative of the highest skill and learning of the medical profession, and with a profound sense of duty to himself, his patients and his profession should measure up to it.

Acute Anterior Poliomyelitis.*

By E. D. Dixon Carroll, M.D., Raleigh,
N. C.

Several things influenced me in choosing the above subject for a paper in this section of the Society; one of the chief being the frequency with which this disease is entirely overlooked in its initial stage. If there

is any necessity for early diagnosis in this disease (as well as others), it seems that it is lost sight of by the general practitioner. I have noticed from personal observation, and in reading the recorded cases, that the diagnosis is rarely made till the paralysis is well established, and generally after atrophy has already begun.

Is there any virtue in absolute rest during inflammation? If so, we should make the diagnosis in this disease early enough to get the benefit of the knowledge we have in the treatment of inflammatory conditions.

Etiology.

Acute anterior poliomyelitis is a disease of childhood, and only about ten per cent. of the cases occur after the tenth year of life. Three-fifths of the cases occur in the first three years, those in the first year occurring in the latter six months. The sexes suffer equally. Four-fifths of all cases occur in the hot months, (Sinkler), and most frequently in cool weather following a very hot period. Exposure is only occasionally traced. Traumatism or over exertion has sometimes directly preceded an attack. There is no proof that dentition has anything at all to do with the onset, though it so often occurs during the period of dentition. In most cases the child is perfectly well when the attack occurs, but defective health precedes it occasionally. Many of the older authorities thought this disease was likely to follow any acute febrile affection, but now we believe the beginning of the attack itself is that of an acute febrile affection, and paralysis is a symptom of the disease proper, and not a sequella of some antecedent trouble.

The disease occurs occasionally almost as an epidemic, and it is noted that a completely isolated case is rare. Several children of different ages in the same family may be attacked within a week or two of each other. This has led, of course, to the theory that it is a germ disease, and that is certainly the best working hypothesis at present, though no germ has been found meeting Koch's requirements.

Pathological Anatomy.

The lesion was first described by Prevost (1865), and the spinal cord lesion is found to be constant. Few patients die early in the disease: at least few cases are diagnosed if they do; and so the exact cause and condition which produces the old lesion found afterward is not known; and the acute lesion has only been demonstrated a few times. It may be proven hereafter that a great many of our cases of "acute indigestion" are undiagnosed acute anterior Poliomyelitis. If postmortem ex-

*Read before the North Carolina Medical Society, June 10, 1902.

aminations were the usual and not the exceptional cases the medical profession would probably be more careful in the minute diagnosis, and the lesion of this trouble would probably have been more fully studied.

The examination of the cord in an old case of the disease shows externally an atrophy of the anterior cornu of the cord in certain areas, depending on the location of the paralysis. Beside the distinctly atrophied area, the entire cord in that locality looks smaller than the healthy portion. The lumbar enlargement is the most frequently diseased, and even in bilateral paralysis, one side is always more atrophied than the other. The anterior nerve roots appear small and gray. Upon microscopic examination the lesion appears to be almost exclusively in the large gray multipolar cells of the anterior cornu. The cells are often entirely absent for a considerable area, the space being replaced by connective tissue, or a few shrivelled cells may be found. The neuroglia tissue in the affected area may have lost its characteristic appearance and look like ordinary connective tissue. The lateral columns adjoining are usually smaller, although they may be normal otherwise. The nerve fibers leading from the destroyed portion are represented by fibrous cords. The nerves given off from that part of the cord will have some fibers apparently normal; others with fatty or granular infiltration, but the majority will be merely connective tissue. The muscles supplied by these nerves may retain a few small normal fibers scattered in a muscle sheath where the connective tissue still remains. Some muscles appear only as fibrous bundles; others normal but small, or may show granular degeneration; or there may be a true hypertrophy. The bones are usually smaller with fewer angles, and much smoother. The brain and coverings of the cord present no lesion usually.

The few cases recorded where death has resulted within a short time after the onset, the pathological changes are of two varieties—inflammatory or hemorrhagic. In a case of Drummond, which died five hours after the onset, "the spinal cord in the cervical region showed undue redness of the anterior cornu. The vessels were distended with blood; also the capillaries, and minute extravasations of blood into the gray substance, swelling of the neuroglial elements, and of the ganglion cells, which were granular with indistinct processes." In other cases recorded where the cornu was examined from one to six weeks after the symptoms began, there was always found changes in the anterior cornu; often widespread in slight degree; more marked in

special foci, especially in the cervical or lumbar enlargement. At these spots the anterior cornu are softened, sometimes hemorrhagic infiltrations, sometimes actual cavities. The extravasations of blood seem to be massed along the blood vessels. Granular corpuscles and other products of nerve disintegration are found. All nerve elements, and especially motor nerve cells, may have entirely disappeared. Where the inflammation is slightest the nerve elements may be intact, but swollen and granular. The signs of inflammation may have extended to the lateral columns adjacent, and they may show destructive degeneration. The posterior columns are never affected. The region corresponds to the origin of nerves supplying the wasted muscle area. The changes described show a general inflammation. Some authorities have described a parenchymatous inflammation, which only affects the motor cells, never extending to adjacent structures.

Symptoms.

We are so often taught that this disease has a sudden onset—that a child may be walking along and fall paralyzed, or go to bed perfectly well and the following morning find several limbs paralyzed—that we lose sight of the fact that these are rare cases, and not all the way infantile paralysis usually begins. In by far the majority of cases there are marked constitutional symptoms preceding the paralysis—by hours or perhaps days or weeks. The severity of these general symptoms do not seem to depend on the extent of the ultimate paralysis, and just what the relation is is still obscure. They do not appear to be the result of the inflammatory conditions in the spinal cord, else they would be preceded by paralysis in all cases. The disease generally begins as any acute febrile disturbance. Temperature ranges from 100 to 102 deg. Fahr., or even to 105 deg., headache and prostration, loss of appetite, vomiting or diarrhea, usually great restlessness. In my limited experience of seven cases I have found restlessness one of the most prominent symptoms, also sleeplessness. In one case especially, the child would not remain in one position five minutes at a time, night or day, for about ten days, during the entire course of the febrile stage. Convulsions are occasionally met with, and other cerebral symptoms, such as diplopia, giddiness, but seldom delirium. In very rare cases symptoms of meningitis are found. Pain is a pretty common symptom in the first stage. Many authorities deny the existence of pain, but in children old enough to complain, and in adults, pain is common, both in the affected limbs and

in the back. In the limbs it may follow the nerve trunks, but more generally appears to be in the muscle—rheumatoid pains in the joints often lead to a diagnosis of articular rheumatism.

I have found sweating a common symptom—profuse sweating, lasting six days in one instance. Tingling and formication may precede the paralysis. Great hyperesthesia is often found, with such marked tenderness in the entire affected parts that the child screams when moved. Paralysis appears early in the disease, and is a constant symptom. The paralysis at first may seem total in the affected limb, but later it will nearly always be found to confine itself to "groups of muscles functionally associated." Some muscles of the group may show absolute paralysis, while others are only slightly weakened. Between these extremes may be muscles of all degrees of paralysis. While there is always a tendency to functional grouping, this is not absolute; therefore, the paralysis does not conform to any type. It may affect any limb. The legs suffer three times as frequently as the arms; the left leg twice as often as the right: next in frequency both legs; then all four extremities; then one lower and one upper extremity, crossed; and last, one or both upper extremities. In the legs paralysis may be absolute. Generally the muscles below the knee, especially the Tibial or Peronii most often affected—producing the typical deformity later. If both legs are affected it is commonly unequally so; hence, asymmetry is the result. The calf-muscles may be the more affected, producing the opposite deformity. In the thigh the extensors are more generally involved, and in the hip the flexor. In the arm muscles, the deltoid is the most often attacked, and with it often the hand muscles, or any other muscle in the arm or forearm. The *seratus magnus* is frequently involved in the arm type. Any muscle in the trunk or back may be affected. Paralysis is always rapid, sometimes appearing first in the disease. It may first involve one limb and very rapidly spread. At first the paralysis may be of wide extent, but one or two limbs may completely recover, leaving a comparatively small area of total paralysis. The paralysis is essentially a motor paralysis, sensation rarely being impaired. Reflexes are lost early and complete. After the paralysis has reached its height, and ceases to spread, it usually remains stationary for sometime, and then improvement begins. However, where wasting occurs, wasting remains, and some permanent paralysis always result. By the end of the third or fourth month all the improvement will have taken place which will occur. Generally, after the first week

the paralyzed muscles do not respond at all to the faradic current, and the galvanic is then increased, and the paralyzed muscles give the characteristic degeneration reaction. If there is ever so slight response to faradism there may be hopes of that muscle recovering—at least regaining some power. After a time, galvanic irritability is also lost in the paralyzed muscles.

As has been hinted, the paralysis is often overlooked at first, and the physician's entire attention is given to the stomach trouble, fever, rheumatoid pains, etc., and possibly a week or more passes before the paralysis is noted. The child often keeps its limbs in unusual positions, but it is not observed until during convalescence that the child shows no power or desire to move the limb. Very rapid atrophy is often observed. A fat, well rounded limb may appear soft, flaccid, cold and useless. The skin is often cyanosed and clammy. The blood does not circulate properly on account of the lack of muscular movement.

The resulting deformities vary greatly—from slightly weakened limbs to dwarfed, contracted and useless appendages. The opposing muscles contract in time, and permanent ankylosis may result, or luxations of the joints due to the relaxation of the tendons and ligaments. The growth of the bones may or may not be retarded.

Course and Prognosis.

The course of the disease is in four stages:

1. The initial stage, accompanied by fever, lasting from a few hours to weeks.
2. The stationary stage—lasting from a few weeks to several months.
3. The stage of recovery of slightly affected parts, and wasting of completely paralyzed parts, lasting from one to six months.
4. The chronic stage, or that of deformity and contraction.

Death is very rare, or it is not diagnosed early in many instances. If very many of the respiratory muscles are involved, bronchial catarrh may produce death. Relapses are exceedingly rare, and second attacks unknown.

Subjects of infantile paralysis are said to be more susceptible to the other forms of spinal cord disease, but this is doubted.

Pathology.

In the case of paralysis commencing suddenly in a child of perfect health, without doubt the lesion is acute hemorrhage. The onset is too sudden to be dependent on inflammatory changes. Another point in favor of this is, those cases show only one focus of trouble. It is a sudden hemor-

rhage in the course of the motor fibers cutting off either the nerve or ganglion nutritive cell, causing sudden paralysis, followed by atrophy and death of the tissue supplied by those nerves. In the inflammatory cases, there is the slower onset of paralysis, with total paralysis of some nerves, and partial paralysis of others, with recovery in still others, where the inflammatory changes have not gone to the destruction of tissue. Destroyed nerve elements do not regenerate, but inflamed tissue may return to normal. Gower's attributes both the inflammatory and the hemorrhagic variety to what he calls a certain "blood state." He looks upon the cause of the disease as being constitutional, with local manifestations in the spinal cord, and in no way regards the spinal cord lesion the cause of the general constitutional disturbance.

Diagnosis.

In the first stage the diagnosis is the most difficult and the most important. It so closely simulates any mild febrile disease that a diagnosis cannot be made till the paralysis appears. Hence, the importance of finding the earliest manifestations of paralysis. Paralysis may be mistaken for prostration. The rheumatoid pains mislead, unless it is carefully noted that the pains are not located in joints, and do not depend on motion, but are spontaneous. The diagnosis of cerebral paralysis is easy, and the electrical reactions are conclusive. The diagnosis from rachitis, scrobutis and hip-joint disease should not be difficult if the cases are studied. In adults especially, the diagnosis from multiple neuritis is difficult, especially if some neuritis accompanies the anterior poliomyelitis.

Treatment.

In the initial stage the treatment should be absolute rest and quiet. As there is active inflammation of the spinal cord there is a great possibility that it will spread if motion is allowed. As the child is likely to be restless, mild sedatives should be administered. Hot applications to the spine are advised. Belladonna and ergot have also been advocated with probably little to prove their real value. Electricity should be avoided so long as there is any inflammatory condition,—therefore, for at least three or four weeks from the onset. Gentle massage and warmth should be applied several times daily to the affected parts. In this way nutrition of the muscles may be kept up so they will have the best possible chance of recovery. After the stage of inflammation has passed, the danger of great deformity is reduced by the prevention of contraction of the opposing muscles by means of mechanical ap-

pliances. Braces which keep the limbs from contracting for several years will prevent any marked contractions. There is only this disadvantage to mechanical appliances: that the limb will not be used at all, and that, too, during the very period of life that the greatest development takes place normally. The normal development of the partially paralyzed muscles is in this way hindered. The best mode of treatment, I believe, is to allow free use of the limbs during the day, and have braces worn during the night, for it is during sleep that the greatest danger of marked contraction exists, on account of the easy position the limbs naturally assume. Electricity and massage should be kept up—not for any curative effect, but to merely stimulate nutrition of the partially paralyzed muscles.

Since 1892 much has been done by surgery for the relief of the great deformity and the helplessness of patients. As the lower extremities are affected more frequently than any other, the patients are more helpless, being unable to walk, especially if the joints are weakened, or there is great contraction. A firm, stiff joint is greatly to be preferred to a very weak one, and a permanent ankylosis is sometimes resorted to. Often the entire group of muscles are not paralyzed, and it is possible to transplant the tendon of the paralyzed muscle with excellent results. Even transplanting it into a healthy antagonist will sometimes make a useful joint. As an example for transplantation, the following is frequently employed. When the entire quadriceps extensor is involved, the sartorius may remain active, and in the hamstring muscles may produce complete permanent flexion of the knee. If the tendon just above the patella is transplanted into the tendon of the sartorius, and the sartorius developed to its greatest capacity, it can, by its contraction, materially help extension. Two methods have been used: transplanting the tendon of a paralyzed muscle into a healthy muscle, or cutting the tendon from a healthy muscle and attaching it to a paralyzed one. When transplanting is impracticable, shortening the paralyzed tendon and attaching it to the periosteum of the bone beyond the joint has proven to be beneficial.

Management of Smallpox Outbreak.*

By P. J. Macon, M.D., Warrenton, N. C.

Possibly nothing in the history of the State has so disturbed the minds of the pro-

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fession and laity as has smallpox within the last four years.

It has traversed this old commonwealth of ours from mountain to sea, and from border to border, making its unhallowed visits to every county and almost every city and hamlet in the State. Unwelcomed, but still it lingers and hovers around, until it has become domesticated, and seems to be a part of North Carolina property.

The subject is a complex one, comprising both the medical and the legal side, and must be viewed from many aspects and also under many difficulties. To discuss this subject, one must be cautious, lest he wounds the feelings of some, and yet to treat the matter trivially and indifferently, would not be just to the one upon whom the responsibility of dealing with involves.

The management of smallpox is a difficult and arduous task undertaken, never to be half paid or rewarded for the work, if done faithfully, conscientiously and well. The physician, to do his duty, must necessarily expose himself to many conditions, and under many adverse circumstances, exposure to weather, rain and storm, visit badly ventilated houses of filth and poverty. It seems impossible to accomplish anything with such surroundings.

But with an iron will and strong determination to conquer, as a successful physician must have, things seem to be done easily. The demon is here; we are about to meet him unaware of his advent.

What is his history? An insidious, filthy, loathsome, spotted disease, that made its appearance in the world somewhere in the fourth Century, history tells us. No one claims its ancestry positively. Some say it originated in China many years before Christ, while others claim that it existed in India from time immemorial. It is evident that it is hoary with age, but still, active and apparently in the bloom of youth, will live many years yet and grow fat, from all indications.

They say America got it from Spain, (as we have other troubles) early in the sixteenth Century. As there seems such diversity of opinion as to its origin, I will not dwell longer on that line, suffice it to say, it is here, and I fear to stay, as it has received such a cordial reception and mild treatment. But why should we fold our arms in humble submission, when, it seems to me, we have the means to drive it from our door and exterminate it from the face of the earth?

One asks the question, "How or in what way, can it be exterminated? The answer is, by a thorough system of universal vaccination, and rigid quarantine regulations.

If I may be pardoned for so doing, I will

take up the first part of the answer and relate a little personal experience:

On the 9th day of March, 1899, I was called to see a young man about thirty years of age, suffering with an intense headache, excruciating pains in back and limbs, nausea, very restless and nervous, complete anorexia, temperature (sublingual) 105, Fahrenheit, heavily furred tongue, pulse 120. Questioned patient as to premonitory symptoms; said for two or three days had felt badly, with no inclination to move around, also loss of appetite. On the 8th, the day prior to my visit, had felt very chilly, in fact, thought he had a decided chill. As La Grippe was very prevalent, and no smallpox existed in our community, I very promptly diagnosed it La Grippe. I again visited him in the afternoon, and found him more comfortable, but very nervous. I had already prescribed in the forenoon the usual Grippe remedies with directions for tepid sponge bath, as the skin was very hot and dry (this to abate fever and relieve nervousness). Being very anxious, as well as uneasy about him, made the third visit, found him restless, but temperature somewhat reduced. After giving him 10 grains Dovers powder, left him sleeping very quietly. Next morning called early to see him, and found him very much nauseated. To make a long story short, found him decidedly worse, and also delirious. One strange feature was that he laid at full length in the supine position. I asked him if it pained him to lie on his sides and he said it did not. It seemed that he naturally went that way unconsciously, could assign no reason for it. This seemed anomalous. My last visit that day was about 9 p. m. He was more delirious. I gave perorem, one and a half drachms bromide. In a little while he was sleeping quietly. Next morning to my surprise and delight, I found him sitting up smoking a cigarette. He expressed himself as feeling well, and further added that he had been down in the dining room, and enjoyed a good breakfast with the family. While he was talking I noticed two little suspicious and suggestive bumps, one in the middle of the forehead and the other in the brow. Very naturally, I began to feel the little sentinels with my index finger. There must have been a change in my countenance, for certainly there had been in my head. His wife, who was sitting near by, said, "Dr. oh! Dr. Macon, hasn't my husband got smallpox? (she seemed to speak as by intuition). I said, "He certainly has." She said, "I knew it by your look." That moment I put him, his wife, child and nurse under quarantine. I then went down stairs and quarantined the other members of the family and servants, four in

number. I then put the head of the family under \$5,00 bond, "verbally," if they broke the quarantine before I returned. I immediately repaired to my home by the back way, entered my garden, called my servant and ordered him to bring me a tub of water and an entire change of clothing out and out. I also directed him to put them in a certain place which was about fifty yards from me and depart. This being done, I undressed, put a match to them, hats, shoes and all, then went to the bath house, which was beautifully provided for by nature with the canopy of heaven as its top and the freezing winds of March bringing news of melancholy and gloom as its curtain. After my bath (you can imagine how I felt; I could hardly pull on my shirt for the horny excrescences that protruded from my body. I strictly had the "bumps" in mind and body), I went to my dressing room, donned a suit of linen, and hastened back to the most desolate looking spot my eyes ever rested upon, I thought. I then put things under thorough quarantine, left directions, antiseptics, prepared disinfectants, and had the whole household thoroughly vaccinated. I also had two guards employed, one for day and the other for night.

I would like to go into a more minute detail as to treatment, management, etc., but as this is such a comprehensive subject, it would consume too much time of the convention, and possibly, intrude upon the right of others with perhaps more interesting and instructive papers. However, I must dwell for a short time on the efficacy of vaccination. There were eight inmates in this infected house, including the patient. None had been vaccinated in several years, and four had never been. It cannot be said that they had not been exposed, for they were with the patient frequently, and some occupied the same room all the time. The wife had been vaccinated three times, and bore as many very large scars. I considered her an immune, and so assured her that she was in no danger. She realized her safety and was very useful. Being a very intelligent woman, with the assistance of her nurse, she managed things beautifully. The entire household being vaccinated, in a few days there were signs of successful vaccination in all, except the nurse. She was re-vaccinated in three different places, but without avail. On the 3rd of April she was taken with a chill, other symptoms accompanying. A typical case of varioloid developed. Remember, this was twenty-five days from exposure, but about fourteen days from the beginning of the dessication period. This comes to the point that I would like to make and emphasize, "the period

of contagion." Osler says, the contagium develops in the system of the smallpox patient, and is reproduced in pustules; it exists in the secretions and excretions, and in the exhalations from the lungs and the skin. The dried scales constitute by far the most important element and as a dust-like powder, are distributed everywhere in the room during convalescence. It goes on further to say that the disease is probably contagious from a very early stage, though it has not yet been determined whether the contagion is active before the eruption develops. This has been thoroughly settled in my mind by close observation received from many standpoints.

Now, let's trace this case, in order to corroborate and confirm my opinion. On the 7th the patient referred to mingled with the people of the town, possibly seeing several hundred, pulled off his overcoat and loaned to a friend who wore it several hours. Feeling badly, he laid in the bank where the occupants were at work, more than an hour. From the 8th, day of chill, to the 11th, the stage of high fever, was seen by twelve visitors, some remaining for more than an hour, a little nephew, playing on the bed with him. This takes us to the eruptive stage. After that no one saw him except the attendants, six in number. Among these five showed scars of successful vaccination. The only one that had not been vaccinated was the nurse, the one who contracted the disease. This shows the necessity of early vaccination and also seems to fix the stage of contagion, which I believe is after the stage of supuration or during the stage of dessication, the dust-like powder is inhaled into the lung or taken in the stomach by drinking or eating, being assimilated, is taken up by the blood and thereby poisons the system and develops smallpox, shows itself in the form of pustules where it is reproduced and comes to maturity.

And so it multiplies as if licensed by nature to do its nefarious work on as large a scale as possible. This brings us to the duty of the Health Office. To make vaccination of any immediate or material value during or pending an outbreak, it must be done early, very early in order to make the community immune as far as vaccination can do it, which is universally conceded to be an absolute protection. Then why delay this very important necessity a moment? In order to make vaccination efficacious there must be harmony and unison among the profession and a concert of action between the Superintendent of Health, the county and town officials. With this well determined, the laity will be easy to fall in line, but, with one obstinate physician, he can

spoil the whole undertaking, and nothing but force then will be of any avail, and that is very annoying and objectionable. But, if necessary, enforce the law and do it at once, the earlier the better. A kicking, hard-headed doctor, who will not listen to reason should not be allowed to hinder, delay or possibly thwart this important duty that you owe the people, and imperil the lives of many besides the great destruction of property, which is small in comparison to the loss of the most unworthy citizen.

With the harness on, go to work and vaccinate the entire county in a short time. This can be done in five days as well as one month.

I am thoroughly disgusted some times when I see where Dr. ——— vaccinates seventy-five in one day, when it should be seven or eight hundred. Pay the vaccine staff less per capita and they will do more as a rule. Have vaccine stations and you will be surprised to see how many will apply for vaccination. They will come from other counties. That was my experience and I suppose human nature is alike everywhere. People like to congregate in crowds, especially if there seems to be any excitement. Record every name, get a man who knows the people in his district.

After he has vaccinated all that have applied which will be the bulk, then he can go and take those who have not applied at their homes or places of business. This is hard work, but the condition of things demand it. In five or six days the vaccinated must be looked after, as some may have to be revaccinated. Don't be alarmed; you will have some bad looking arms. Out of the three thousand that I have vaccinated (in less than six days) there was not a single serious result and ninety-eight per cent. were successful. I am satisfied that vaccination has been neglected very much all over the State. I notice in the Bulletin of the North Carolina Board of Health that there are twenty-two counties that have more than one hundred and sixty cases of smallpox. This should not be so. There is a great fault existing in some channel, but as it is not incumbent upon me to find where the omission of duty lies I will leave the matter to those whom the duty does devolve. I am sure that our worthy Secretary of the Board of Health has done his part, for he has worked diligently, untiringly and faithfully, and it is obvious that his wise writings and efforts to exterminate this great curse from the State have gone unheeded, and been little appreciated by the great majority. As to quarantine and disinfection, I will refer you to the office of the Secretary of the Board of Health, and upon application, you will be sent a

small pamphlet from which you can get all necessary instructions more fully and completely than I can here describe.

As to the last part of my answer: By strict quarantine regulations—to do this effectually there must be provided a pest house or hospital for the treatment of the affected. This should be located in an isolated spot with ample grounds for all necessary buildings, etc.; it should be high and dry, preferably in the woods and near a running stream, as an abundance of water is very essential. House should be as plain as possible, so that it can be thoroughly whitewashed and easily disinfected, but at the same time comfortable and well ventilated. There should be four houses of this kind, one each for the males and one each for the females of the different race. There should also be provided a house of detention, with kitchen, dressing-room, etc., all supplied with the requisite appurtenances. Patient with disease should be placed in hospital promptly. As to treatment, there is little to be done in the way of combatting the disease with medicine, but should be carefully nursed by one who has become immune either by smallpox or vaccination, preferably the former. Patient should receive a mild tepid bichloride bath at least once a day and entire body thoroughly anointed with carbolated vaseline; this is done to destroy the sporadium variolae and to render the skin soft. Also prevents crusts forming and makes desiccation easy and very little pitting will follow, the dust like powder is prevented on account of the moisture produced by the continuous inunctions. "I emphasize special stress on the above treatment of the skin." Symptoms must be treated as they arise. Be sure to not discharge the patient too early, as there is danger of infecting others by the flying scales. Be certain that his clothing is rendered as thoroughly sterile as possible, and body made aseptic by baths and disinfectants. Suspects must be detained at least fourteen days from exposure (this is, I think, the rule) and if symptoms of smallpox begin to show themselves remove the patient to hospital. Have those who have escaped the disease disinfected before being dismissed. One nurse can take care of ten patients. Clothing, bedding, beds, etc., must be washed or aired often and treated with bichloride or formalin vaporization. The physician in charge should be a sworn officer and should be Chief of Staff. There should be a well disciplined patrol guard posted day and night. They are to be carriers of packages and supplies from place of deposit to commissary and perform general guard duty. If smallpox continue to make its invasion from other towns

or other quarters, why then quarantine against those places is imperative. Have inspecting officers to examine all trains, public carriers, etc., and require them to be thoroughly fumigated. By such a method of dealing with smallpox (as I have briefly outlined) am sure it will soon be something of the past. The health officer should be a physician, a man of an acumen mind, unselfish and honest with an eye ever looking to the promotion of health and general welfare and comfort of the people. Such a man will be loved and honored, his devotion to duty admired, his course approved of, his acts applauded, his name lauded, and will go down in history a hero. On the other hand, the slothful and careless one, who has allowed the disease to lurk around and become epidemic, is deservedly scorned at and held in contempt by all and will ultimately sink into an ignominious oblivion, a just rebuke.

In conclusion, I would suggest that this convention authorize and empower the Board of Health as a delegation from this body to memorialize the Legislature and urge them to pass adequate laws in regard to compulsory vaccination, provided our present law is inadequate and impracticable (impracticable) as it has proven to be in the past, or the enforcement of which has been very much neglected.

Perineal Lacerations--Their Prevention and the Necessity for their Immediate Repair.*

By E. A. Moye, M.D., Greenville, N. C.

As Chairman of the Section on Obstetrics, I have decided to call the attention of the Society to the subject of Perineal Lacerations. In my opinion, this condition is often not detected, and when it is, it is seldom given the thought and attention which its importance demands. All of us are familiar with the classical symptoms of this unfortunate condition. The dragging down pain, the lack of support for the pelvic organs and the disturbance of the functions of the bladder and rectum, are conditions met with almost every day. When the laceration is complete the condition is still more pitiable. The inability to control the bowels has made the sufferer shun society and spend her time brooding over her misfortunes, until she is both a mental and physical wreck.

During my limited experience I have seen so many of these unfortunates, that I have been forced to the conclusion that the proper attention is not given to the preven-

tion of this condition, and I shall emphasize some of the means which have been of service to me in decreasing the number of these unfortunate accidents.

In considering the subject of Perineal Lacerations, there are three factors which are to be considered:

First. Resisting power of the perineum. If the patient is in good health at the time of labor, the resisting power will be much greater than if the patient is weak, anemic and in poor condition, and tears will be much less likely to occur. Hence the first point to emphasize is that we should get our patients in tip-top condition before the time of parturition.

The Second factor to be considered is the size of the child's head. Of course, if the size of the child is out of proportion to the size of the vaginal outlet, lacerations will unavoidably result. Over this we have no control and I shall not discuss it any further.

The Third factor which enters into the discussion of this subject is the speed with which the child is forced through the birth canal. And it is to this point that I wish especially to call your attention, for upon this largely depends our success in preventing lacerations, and over this we have more control than any of the others.

We can regulate the rapidity with which the child is forced through the birth canal in two ways. First, By pressure upon the presenting part and at the same time pushing the head up under the pubic arch, thus causing the head to be born in its smallest circumference.

Second. By controlling the pains by directing the patient when and how "to bear down," and the judicious use of chloroform.

Another point which has been of great service to me is to prevent the expulsion of the child's head until the pain has passed. During the pain, the perineum is firm and tense, and much more likely to tear than if the head is delivered between the pains, when the perineum is soft and relaxed.

In my opinion, the judicious use of chloroform will do more to prevent lacerations than all other means combined. It should not be given until the latter part of the second stage when the head is well down, nearly or quite to the perineum. Then the pains become more frequent and more severe. Just before the patient makes any outcry, there is a slight descent of the head.

This generally precedes the pain for a few seconds, and this is the time to give chloroform. The administration should be continued as long as the presenting part is pushed down and as soon as it begins to retract, should be discontinued. This should

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be repeated with each succeeding pain and just before delivery, should be pushed almost or quite to, surgical anaesthesia.

An Esmarch Inhaler will be found very useful for administering the chloroform. A few drops can be poured on it and the inhaler can be laid over the patient's mouth and nose without any danger.

If these precautions were strictly observed the danger of laceration would be much diminished, especially in normal labors. Of course, when forceps are used, the danger is very much increased, but still if they are carefully and properly used and if the operator will use as little force as possible, the danger can be very much diminished. In my practice I often remove the forceps when the head bulges the perineum and I can control it without the use of instruments. In this way lacerations can often be avoided and if not avoided, their severity can be very much diminished.

The rotation of the occiput posteriorly also increase the danger of laceration and in breech deliveries the life of the child often depends upon the prompt delivery of the after-coming head and the tissues do not have time to stretch and hence lacerations are more liable to occur. In many instances the head is delivered without a tear, or a very slight one, but the shoulders are delivered too quickly and the slight tear is converted into a severe one. If the physician will remember all these dangers and guard against them, much can be done toward the prevention of lacerations and even when they do occur if they will be prudent and cautious, complete or severe lacerations would almost be unheard of.

But in spite of every precaution, all of us will have in our practice lacerations more or less severe. The great Dr. Lusk once told me that when a physician told him he did not have any lacerations in his practice he knew he was either telling a falsehood or did not have sense enough to know a laceration when he saw it.

After every delivery it is the duty of the physician in attendance to make a careful examination of the perineum. It matters not what the hour may be, or how much of a hurry he is in, or how tired and exhausted he may be, this rule should be strictly adhered to. I know from experience how strong the temptation is to wait for a more convenient season, especially after a long, and tedious labor, but I do not think it is justifiable to wait, unless the condition of the patient is so serious that it is not advisable to tax her strength any farther. The parts should be washed with an antiseptic solution, and two fingers having been introduced into the rectum, by pulling the posterior vaginal wall forward, bring

it into view. By this means it is a very easy matter to find out whether there is any tear or not. If there is no tear, no harm is done. On the other hand, if a tear is found, now is the time to repair it, if in his judgment it needs repairing. The question whether or not it needs repairing is a matter of judgment and common sense. It is better to err on the side of safety, so if there is any doubt about it always repair it. No rule can be laid down that will fit all cases, as it is a matter of individual judgment, but a safe rule to go by is to always repair it if the tear extends down to or nearly to the sphincter ani or if the perineal body is involved. The action of these muscles is to pull the torn surfaces apart and it is almost impossible for union to take place unless they are united.

There is no valid objection to the immediate operation. It is not difficult, it is not very painful and its performance diminishes the risk of infection and shortens the puerperal period. Then, too, at this time the tissues are so benumbed that it is rarely necessary to give an anaesthetic unless the tear is quite an extensive one.

The operation is very simple. The patient is placed across the bed with her hips resting on the edge and her legs held by two assistants. The parts are washed with some antiseptic solution and a piece of sterile sponge introduced into the vagina high enough up to catch the discharge and to keep the parts clean. The middle and index fingers of the left hand are introduced into the rectum and the posterior vaginal wall pulled forward, the thumb and other fingers separating the labia, bring the tear into view.

The sutures employed vary very much and are largely a matter of choice. Personally, I use catgut for the repair of the vaginal mucous membrane and silk-worm gut for the skin. Silver wire is largely used and is highly recommended by the best authorities, but I have never had any experience with it. It is important to begin the sutures at the upper angle of the tear and many times the success or failure of the operation will depend upon this point, for if the upper angle of the wound is not completely closed, the lochia will drain into the wound, form a pocket and prevent primary union.

In introducing the sutures the operator should use some form of perineal needle. One with a round handle is very troublesome because it is very difficult to keep from turning, and for that reason I never use it.

With the index and middle fingers introduced into the rectum, high enough to bring the upper angle of the tear into view, when the posterior vaginal wall is pulled forward,

the needle should be introduced about one-eighth of an inch from the margin of the wound and should emerge at a corresponding point on the opposite side, so as to have the sutures buried. My rule is to begin at the upper angle of the wound in the vaginal mucous membrane and introduce enough sutures to completely close it. Then in repairing the wound in the skin, it is best to introduce the first suture at the posterior angle of the tear, so as to get good apposition near the sphincter ani. Another point of importance is to be careful not to tie the sutures too tight, for after the parts swell they will be very painful and often tear out.

The silk-worm gut sutures should be removed about the tenth day. As a rule the catgut will be absorbed, but it is a good rule to remove all those that have not been absorbed at this time.

If the labor has been conducted in accordance with aseptic or antiseptic principles, if no syphilis exists, and the vitality of the tissues has not been impaired by oedema or long continued pressure, primary union almost always takes place and the patient will be in much better condition than if the wound had been allowed to heal by granulation, besides the time saved by shortening the puerperal period.

Much of this paper will doubtless seem very unnecessary to most of you gentlemen, but if what I have said should prove of benefit to any member of this Society, and if the number of neglected perineums should be diminished, I shall be more than repaid for the time I have devoted to this subject and I will not feel that I owe any apology for taking up the time of the Society with this discussion.

The Radical Cure of Hydrocele.*

By Hubert A. Royster, A.B., M.D.,
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It would seem unnecessary to discuss so ancient and simple a malady as hydrocele of the tunica vaginalis but for the confusion which still exists concerning its proper mode of treatment. Surgeons are often uncertain as to what advice to give patients who present themselves for relief. When authorities are consulted there is found a jumble of conflicting ideas, and one is constantly hesitating to choose the plan of treatment suitable for each individual case. With this thought in view and this experience as a guide, it is proposed here to examine into the different procedures recom-

mended for the cure of hydrocele and to carefully consider their results.

In order to elucidate the points involved in attaining a radical cure, it is proper to review the pathology of hydrocele. It is a much more common affection than is usually supposed, being more frequent in old and middle-aged than in young men, though it does occur in the latter. It consists in an abnormally large amount of serous fluid in the space between the layers of the tunica vaginalis testis. This fluid is generally clear and of a straw color, but it may be dark and thick or bloody. In all hydroceles the interior lining is glistening in appearance while the sac-wall is more or less thickened. From this serous surface constantly exudes the secretion which fills up the tunic space and constitutes the cystic tumor known as hydrocele. Removal of the fluid simply allows a reaccumulation from the weeping wall, whose secretory power is not disturbed by this process. The only means of affecting a permanent cure is to prevent this excessive secretion by destroying the function of the cells and obliterating the cavity.

Dismissing simple tapping as intended solely for the few patients who are too old and feeble for the more severe methods or for the others who may be so foolish as to refuse them, there are in vogue two well-recognized plans for the radical cure of hydrocele: First, the injection of certain chemical substances following removal of the fluid; and, second, some form of incision or excision of the sac. The materials usually injected are the tincture of iodine and carbolic acid, each of which by its irritant action sets up an adhesive inflammation. Excision of the sac may be partial or total; antiseptic incision requires subsequent packing. For permanent results one of these methods must be practiced, but to determine which one, in any given case, is often a difficult matter. Opinions differ as to the value of the injection plan and as to the expediency of the incision methods.

A historical review of the literature will show how vacillating have been the ideas on the radical treatment of hydrocele and how widely these same authorities have varied. The elder Gross, to whom we go as the fountain-head of all surgical knowledge, speaks of incision and excision as being obsolete, the former being the oldest of all and excision being revived in 1755. Gross' preferable operation was by the seton method, but during the last ten years of his life he cured many cases "by laying open the vaginal tunic with a small incision, and after all the fluid had been discharged, mopping the sac freely with equal parts of iodine and alcohol, or iodine variously diluted. In no

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instance have any unpleasant symptoms followed this procedure." He mentions strong objections to the injection method, viz. occasional failure, escape of the injected fluid into the cellular tissue, severe inflammation and sloughing. He speaks of a case in which death from tetanus followed an injection of port wine and water. It is easy enough to understand, in the light of our present knowledge, why Gross had trouble in a closed sac with the injection method, but did not with the seton or open wound where drainage was secured. In *Holmes' System of Surgery* (1881) it is claimed that iodine has the advantage over other fluids for injection and that incision into the sac "is an effectual method, though unnecessarily severe for ordinary cases." In the *International Encyclopedia of Surgery* (1886) *H. R. Bell* quotes Sir Astley Cooper as saying of incision and excision "that they are too dangerous and too cruel for so trifling an inconvenience," and speaks of the injection method as being known to the ancients. Further, Bell states that "the treatment of hydrocele by antiseptic incision is especially useful when the injection of iodine has failed" or when other complications exist. It is, he says, doubtless a safe and certain method, but it requires an anesthetic and is more likely to go wrong from the patient's indiscretion. "Patients who are too ill or too aged to be subjected to the treatment by injection had better be contented with palliative measures."

Of the more modern writers we find that *Wyeth* (1887) recommends but two methods, injection and incision, the former to be preferred in recent cases, with a small sac and without thick walls. If this fails, it should be repeated once or twice before the more formidable procedure is done. Later (1898) he says that the carbolic injection method should cure about 75 per cent. of all cases at a first injection and speaks of using in recent years local anesthesia for operating even by the incision method of *Volkman*. *Moullin* (1891) says that failure occurs in at least one-third of cases treated by the iodine injection and regards partial excision as much more satisfactory. He thinks it a question whether castration is not to be preferred as producing less risk in aged, broken-down patients with thickened sac-walls. *Morton's* conclusions are quoted in *Dennis' System of Surgery* (1895) and the substance of these is that injection of iodine and carbolic acid will cure about 85 per cent.; that the acid is growing in popularity; that antiseptic incision will guarantee a cure with almost absolute certainty and that the danger is no greater than in the injection method; that the treatment by excision is probably unnecessary

and unjustifiable. *Tuholske*, in the *International Text-Book of Surgery*, regards *Levis'* carbolic injection method as the preferable treatment, having seen but one relapse in twenty cases, and reserves incision methods for those cases in which the injection fails or complications exist. *Da Costa* (*Modern Surgery*, 1900) believes that injection of irritants should be abandoned on account of inflammation occurring without drainage. He seems to prefer *Hearne's* plan of incising the sac, drying the interior with gauze, swabbing with pure carbolic acid and packing with iodoform gauze. *Da Costa* says, moreover, that "it has recently been proposed to tap the sac with a trocar and cannula, to leave the cannula in place as a drain for some days and to dress antiseptically." *Jacobson* is well satisfied with the antiseptic incision and prefers it when the patient can lay up. *Bryant* uses a modified excision method as the best operative procedure. *Fuller* considers the carbolic injection the method of choice in the largest number of cases. *Zuckerkan*dl (*Atlas of Operative Surgery*, 1902) says that the iodine injection with regard to the certainty of the result stands behind radical incision. The excision method of *von Bergmann* is favored and also the less radical modification of *Winklemann*, who incises the tunic and closes it to such degree that the testicle cannot return into its cavity while the cutaneous wound is closed over the folded serous sac and the testicle.

From this array of opposing evidence, we may conclude that the safest plan of undertaking the radical cure of hydrocele is first to withdraw the fluid and inject into the sac a small quantity of the tincture of iodine or pure carbolic acid, preference being in favor of the latter. If this method fails, as it will in some cases, excision of the sac will offer the best chance of success.

My personal experience leads me to believe that the injection method rarely succeeds the second time and that after a primary failure nothing is gained by a repetition of the procedure. Some sacs, however, after being injected, fill up with a bloody fluid, which absorbs very slowly and appears to prevent a permanent cure. This fluid may be drawn off with a cannula, without repeating the injection, and thus the desired result may be obtained. Such a state of affairs came about in a case of my own, which, after being managed as described, seems now to be cured. My recent records show 16 cases of hydrocele, one of which was bilateral. Of these 15 were treated by the injection plan, divided as follows: 10 by iodine and carbolic acid combined, 3 by iodine alone, and 2 by the

acid alone; the remaining case was subjected to an excision of the sac, with a perfect result, six months after a failure by the iodine injection. None of the cases have so far recurred. It is not permitted me from this limited experience to lay down any positive rules, but I am firmly convinced of the fact that the injection of hydrocele cures a large percentage of cases and that it should always be done first, reserving the more serious, but hardly more radical, operations for cases which cannot be cured by injection. Carbolio acid is still gaining in favor and Coley has lately suggested its use in much smaller quantities than usually advised, viz., 5 or 6 drops, an amount which he asserts is sufficient for even large hydroceles, if it is thoroughly distributed over the sac-walls. My combined use of the acid and iodine was thought of as a means for obtaining the good effects of both agents. I think, however, that a few drops of carbolic acid will be the ideal injection fluid.

The Urine.

By F. O. Rogers, Concord, N. C.

The recent advances in our knowledge of Physiological Chemistry together with a more extended and refined use of the microscope have enabled us to pursue a more careful and thorough study of the urine in its relationship to the human body both in health and in disease. The variations in nutrition and waste are accurately recorded in the urine, hour by hour and by an intelligent interpretation of our modern methods of urinalysis, these physiological actions may now be read with as much precision as we can number the pulsations of the heart. Wherever pathogenic processes seriously disturb metabolism or nutrition, the results are recorded in the urine. In order to fully comprehend the relationship of the urine to the organism under the influence of various pathological conditions it is first necessary to become acquainted with the physiology of secretion and excretion as well as the normal constituents of the urine together with those various changes recorded in the normal urine.

The urinary glands (the kidneys) are very complicated in structure, but when we take into consideration the divers duties of these organs we are not surprised. They remove from the blood all the impurities whether they result from normal or pathological change. Through them all injurious, useless, or superfluous matter is eliminated. Any substance, soluble or insoluble, colloid.

or crystalloid, alkaline or acid, which tends to alter the normal constituent of the blood is expelled and eliminated through the urine. We are not yet able to say in what part of the gland this work is done; possibly certain portions of the gland are set apart to perform certain functions.

Fifty years ago Bowman stated, that, judging from the construction of the gland, there are two distinct portions in the structural activity of the kidney, each one of which plays a different part in the production of urine, (1) the tuft of the vessels to furnish the fluid portion of the urine and soluble salts; (2) the solid matter, urea, etc., is separated by the aid of the glandular epithelium lining the convoluted portion of the tube. Recent investigations tend to support the theory of Bowman as stated by him in 1854.

Urine contains no proteid, as we know the proteid molecule, and is incomparably richer in solids and urea than the blood, hence the secretive process is now applied to the glomerulus. At present it is generally conceded that the processes of urinary secretion depend essentially upon a specific activity of the cells of the epithelium of the urinary passages, besides which processes of filtration and diffusion, also take part. The afferent artery being larger than the efferent artery the volume of blood is diminished in the glomerulus by loss of water and soluble salts, which passes through the vessel walls as a secretion. The process of the secretion of urine in man and the higher animals is generally considered to proceed chiefly as follows: The water together with a small amount of salts passes through the glomeruli Malpighii, while the chief part of the solid is secreted by the epithelium of the urinary passages. A secretion of solids without a simultaneous secretion of water is not possible and therefore a part of the water must be secreted by the epithelium cells of the urinary passages. The passage of water through the glomerulus is rather generally considered to be a filtration due to blood pressure. According to Heidenhain, the thin cell layers of the glomeruli have a secretory action.

The amount and the composition of the urine are liable to great variations. The incidents under which physiological conditions exercise a great influence are the following: The blood pressure and the rapidity of the blood current in the glomerulus, the quantity of urinary constituents, especially water in the blood, and lastly, the condition of the secretory glandular elements. Above all the amount and concentration of the urine depends upon the elimination of water. That this may vary with the amount of water in the blood or with

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change of circulatory conditions is evident; but under ordinary circumstances the amount of water eliminated by the kidneys depends essentially upon the quantity of water which is brought to them by the blood or which leaves the body by other exits. The elimination of urine is increased by abundant drinking or if the amount of water removed in other ways is lessened. But it is decreased if the amount of water introduced into the body is diminished or there is a great increase in the amount of water removed in other ways. Ordinarily in man equally as much water is eliminated by the kidneys as by the skin, lungs, and intestines together. At a low temperature and in a moist air the amount of urine is increased, as under these conditions the amount of water eliminated by the skin is reduced. Diminished introduction of water or diminished secretion of water (as in violent diarrhœa, persistent vomiting or abundant perspiration) greatly decreases the urine. For example, the urine may sink as low as 500 to 400 c.c. per day in intense summer heat while after copious draughts of water the elimination of 3,000 c.c. of urine in twenty-four hours has been observed. The average quantity of urine secreted in the course of twenty-four hours for healthy grown men is 1,500 c.c. (three pints) for women 1200 c.c.

The quantity of solids secreted in the course of twenty-four hours is rather constant even though the quantity of urine may vary and it is more constant when the manner of living is regular, therefore the percentage of solids in the urine is naturally in an inverse proportion to the quantity of the urine. The quantity may be calculated with approximate accuracy by means of its specific gravity. If the second and third decimals of the specific gravity be multiplied by Haser's coefficient 2.33 the product gives the amount of solids in a thousand c.c. of urine and if the quantity of urine eliminated in twenty-four hours be measured the quantity of solids in twenty-four hours may be easily calculated. The amount of solids given will be in grammes.

As above stated, the percentage of solids in the urine generally decreases with a great elimination and an abundant secretion (Polyuria) has therefore, as a rule, a lower specific gravity. An important exception to this rule is observed in the urine containing grape sugar (Diabetes Milletus) in which there is an abundant secretion and a very high specific gravity. An abnormal specific gravity is a fact of great importance in disease, a considerable departure in the normal implies one or two things, either tissue changes are notably suspended and their products formed in smaller quantities

or these processes remaining active such products fail to be removed from the kidneys.

The color of the urine is due to certain normal pigments from the blood which have not yet been separated.

Garrod has lately by a new process isolated from the urine a substance to which he believes the color is entirely or almost entirely due. He believes this to be a definite chemical body and distinct from the urinary products, such as (1) urobilin which is an outcome of the biliary pigments and therefore a derivative of the coloring matter of the blood, (2) hæmatoporphyrin which is present in the normal urine in very small traces.

The color is normally pale yellow when the specific gravity is normal. Otherwise the color depends on the concentration of the urine and varies from a pale straw yellow, when the urine contains small amounts of solids, to a dark reddish yellow or reddish brown in stronger concentration. As a rule, the intensity of the color corresponds to the concentration, but under pathological conditions exceptions occur and such exception is found in diabetic urine which contains a large amount of solids and has a high specific gravity and a pale color.

The reaction of the urine depends essentially upon the composition of the food ingested. The urine of a healthy man has an acid reaction. This acidity is not due to free acid but to the acid salts which the urine contains. This reaction varies at different periods and is modified by diet (as above stated). The acidity is generally less in the forenoon and at times in the healthy human may exhibit an alkaline reaction. After the ingestion of an ample meal or alkalies or the salts of acetic, tartaric, or citric acid the reaction may be alkaline. Healthy urine when allowed to stand for some time becomes at first more acid from an increase of acid phosphates as well as lactic and acetic acid and then it becomes alkaline in consequence of the reaction of a micro-organism. The micrococcus urea which decomposes the contained urea into ammonium carbonate. In the different morbid states the urine may be acid or alkaline. It occasionally happens that the urine is amphoteric. This depends upon the presence of acid or neutral phosphates.

The percentage of the solid and liquid materials varies much, but on an average the urine may be said to contain about four per cent. solids and ninety-six per cent. liquid. Of the solid the most essential and by far the more abundant is Urea. It forms on an average about two per cent. of the urine. It is regarded as the chief end product of the oxidation of the nitrogenous

matter in the body, so that the amount of urea eliminated per day gives an estimate of the nitrogenous metabolism. Urea is found under normal condition in the urine, the lymph, the chyle, the blood, the sweat, the vitæous, humor, and a trace in the saliva. Its presence has been demonstrated also in the substance of the healthy liver in both carnivorous and herbivorous animals. Under pathological conditions urea finds its way into various other fluids, such as secretions from the stomach, the serous fluids and various other fluids of the body. It is one of the few organic substances that has been produced artificially. In 1828 Wohler obtained urea by adding ammonium sulphate to a solution of potassium cyanate; the products of this combination are potassium sulphate with cyanic acid and ammonia in a form to constitute urea. The origin of urea was for years a disputed question, but it is now admitted by eminent physiologists to be in the blood and not in the kidneys. It finds its way into the blood from the tissues and from the lymph, which contains a greater proportion of urea than is formed in the blood. As an outcome of many contradictory experiments and opinions on the subject it must be admitted that the liver produces urea in large quantities. Cyon, in 1870, first made the observation and it has been repeatedly confirmed. In certain cases of structural diseases of the liver the excretion of the urea is much diminished. In fever and in diabetes mellitus there is an increase in the amount of urea. Any variation in the amount of urea eliminated is an expression of changes in the nitrogenous metabolism and as such is of the highest clinical interest. In the healthy man the quantity of urea which is voided in twenty-four hours, on a mixed diet, is about thirty grammes. In a healthy woman somewhat less. Children void absolutely less, but in proportion to their bodily weight the excretion is greater than in adults. The physiological significance of urea lies in the fact that this body forms in man and carnivora from a quantitative standpoint the most important nitrogenous end product of the metabolism or proteid bodies. On this account the elimination of urea varies to a great extent with the amount of proteid transformed and above all with the quantity of absorbable proteids in the food ingested. The elimination of urea is greatest after an exclusive meat diet and lowest after the consumption of bodies free from nitrogen; it is less in such a case than after starvation, for food free from nitrogen diminishes metabolism of the proteid of the body. If the consumption of the body is increased then the elimination of urea is correspondingly increased.

This is found to a rather high degree in certain diseases with fever also, though to a less extent after taking common salt or after abundant drinking of water. A diminished elimination of urea occurs in a reduced consumption of proteids and also in certain diseases of the liver as yellow atrophy and in some cases of chronic interstitial nephritis. In diseases of the kidneys which destroy or disturb the integrity of the epithelium of the uriniferous tubules the elimination of urea is greatly diminished.

Uric acid which should be considered next is found in very small quantities in the urine of malaria, but in birds and insects its salts form the chief ingredient. The amount of uric acid eliminated with human urine is subject to considerable variation, but amounts on an average to 0.7 grammes during twenty-four hours provided the diet is a mixed one. On a vegetable diet the amount is less but may rise to two grammes on an abundant meat diet. The relationship of uric acid to urea is one to fifty to one to seventy. In new-born infants and in the first days of life the elimination of uric acid is increased and the relation between uric acid and urea is about one to thirteen to one to fourteen. Experiments show that uric acid when introduced into a dog is in great part converted into urea and as urea is also formed by the action of oxidizing agents on uric acid outside of the body uric acid has often been considered as a step toward the formation of urea in the organism. With regard to the pathological relations, we really only know of two conditions in which the elimination of uric acid is increased, namely, in fever and leuchæmia. The elimination of uric acid may be diminished in gout shortly before and during the attack because in such cases the uric acid is retained in the body. After the administration of quinine, caffeine and certain other medicines the elimination of uric acid is decreased.

Hippuric acid occurs in small quantities in the normal human urine, but in the herbivora it is one of the most important nitrogenous constituents; here it takes the place of uric acid. Its presence depends on the existence of certain ingredients in the food containing benzoic acid. Benzoic acid and also the substituted benzoic acids are converted into hippuric acid and substituted hippuric acids within the body, therefore the question of the origin of hippuric acid is connected with the question of the origin of benzoic acid.

Oxalic acid is not a constant constituent of the urine, it occurs often but not constantly and it is generally united with lime, making the oxalate of the lime found in the

urine. Oxalic acid is said to appear in greater quantity together with an excess of uric acid after meals and therefore to be related to a production of the latter in the body, but it probably is chiefly derived from oxalates being contained in some materials taken in with the food. Oxalic acid when administered is eliminated by the urine unchanged and as many vegetables and fruits, as cabbage, spinach, asparagus, grapes, apples, etc., contain oxalic acid it is probable that the oxalic acid of the urine originates from the food.

Indican also called Indoxyl-sulphuric acid occurs in alkali salts in the urine. This compound is the mother substance of the greater part of the indigo of the urine. It is derived from indol which is first oxidized in the body into indoxyl and then is coupled with sulphuric acid. Indol is formed by the putrefaction of proteids and is therefore easy to understand why the quantity of indican is greater in people subsisting on a meat diet than on a vegetable diet. The putrefaction of secretions, rich in albumin, in the intestine explain also the occurrence of indican in the urine during starvation. Any disease causing an obstruction of the small intestine causes an increased putrefaction thus producing an abundant formation of indol. A simple obstruction to the larger intestine does not increase the amount of indican in the urine, but if the obstruction causes a marked disturbance in the motion of the contents of the upper ileum there will be an increased elimination of indican.

Sulphuric acid is present in the urine both as simple sulphuric acid and as aether-sulphuric acid. The combination of the latter have already been spoken of. The total quantity of sulphuric acid excreted in twenty-four hours by a healthy adult under ordinary conditions of diet is about two grammes, of which 0.1 gramme is the form of aether-sulphuric acid compounds. But little clinical significance is attached to a general increase or decrease in the amount of sulphuric acid eliminated.

Phosphoric acid of the urine is combined partly with sodium, potassium, and ammonium and partly with lime and magnesia. Being a tri-basic acid it forms three classes of salts; acid, neutral, and basic. Of these the acid phosphates of alkalies and alkaline earths and the neutral and basic phosphates of the alkalies are soluble in the urinary fluid. The neutral phosphate of the alkaline earths are but little soluble therein and their basic phosphates still less so. Two or three grammes of phosphoric acid are excreted in twenty-four hours.

Albumen, which, together with the presence of urinary casts, is of much value to

the clinician. It is found in the urine of apparently healthy people and is often called transitory albuminuria, but these traces of albumen are considered by a great many investigators the first symptoms of a diseased condition of the urinary apparatus or as symptom of a transitory disturbance in the circulation. It is still an open question whether albumen ever occurs in any considerable quantity in the urine of health. Recent investigators have shown that the albumen present in the healthy urine is nucleo-albumen and in as much as every urine holds this substance albumen in this sense is a normal constituent. Aside from that form of albuminuria, which is at once the commoner and more serious, in which there is some disturbance of the renal function, there is a form of albuminuria brought on by a long continued febrile condition which is competent to induce structural alteration in the renal epithelium. This form is usually transitory. Also in anemic and enfeebled individuals independently of kidney disease, disordered circulation, or febrile condition, there occurs albumen in variable quantities which can be accounted for only by assuming changes in the constituents of the blood of such a character that, whilst the structure of the kidney remains intact, and the blood pressure is not appreciably altered, albumen is allowed to exude with the urine. At times albumen may come from the renal pelvis, the ureters, the bladder, or the urethra or through any abnormal communication from neighboring parts. And a positive judgement of its source may be formed from the result of both a chemical and microscopical examination. The migration of leucocytes in some parts of the urinary passage just mentioned may often give rise to a chemical reaction of albumen, and only with the aid of a microscope where you find an absence of renal cast can you exclude the possibility of renal albuminuria.

Of the carbo-hydrates which are found in the urine by far the most important is glucose. The normal urine contains a trace of glucose. The proportion to be found in health is so small that it may be neglected as a disturbing factor even in the most sensitive tests. Wherever the ingestion of sugar exceeds 150 to 200 grammes in twenty-four hours sugar appears in the urine. The presence of sugar is called Glycosuria. Glycosuria never occurs without hyperglycaemia, in other words, the sugar circulating in the blood must be increased considerably above the normal before the kidneys secrete it. Hyperglycaemia may be due to an increased formation or assimilation of sugar or to a decreased destruction or to both. In order to understand the pa-

thology of a disease it is necessary to know something of the function or activities of the organ, the perversion of which the disease represents. It is the normal katabolism of sugar which is the perverted function in diabetes. The sugar with which we are here dealing is glucose ($C_6 H_{12} O_6$) called also grape sugar; it is one of the simple sugars. The sugar is generally taken into the body as cane sugar ($C_{12} H_{22} O_{11}$) and by a process of hydrolysis (the taking up of the one molecule of water) is converted into two molecules of simple sugar ($C_6 H_{12} O_6$)₂. Immaterial of what the source of sugar is, whether from the food or from the fat or proteid of the body, it is finally oxidized into the CO_2 and HO_2 , and as such is eliminated from the body. In the fermentative destruction of the sugar molecule by certain bacteria and other organized and unorganized ferments; as a preliminary step the sugar molecule is split into a simple substances like alcohol or lactic acid that have a greater affinity for oxygen than sugar has, even now some oxygen carrier must be brought into play in order to cause the union of these bodies with oxygen in the body. This sugar splitting ferment which is found in the body, in the blood (the white cells), lymph, and muscles is probably trypsin.

Croftan found that a watery extract of liver pulp always contained considerable quantities of trypsin, thinking possibly this may have to do with the formation of bile pigment from haemoglobin a few drops of trypsin solution (with all due care for antiseptis) were added to a dilute solution of haemoglobin containing a small quantity of dextrose or glycogen and the mixture kept at room temperature for a week. At the end of this time the haemoglobin was found to be destroyed, the liquid colorless and contained bile acids, while bile pigment was found in the sediment. At the same time if trypsin was simply added to the dilute solution of haemoglobin alone, the destruction of haemoglobin occurred very differently, i. e. neither bile acids or bile pigments were formed. The sugar played an important part in this conversion. Determination of the sugar both before and after showed that a considerable quantity of the sugar had been destroyed in this process, in other words, trypsin in the presence of haemoglobin possesses sugar splitting powers.

Properties of trypsin all are familiar with. It digests proteids in alkaline solution.

(2) In contact with certain coagulable solutions it causes coagulation.

(3) Injected in the veins of an animal

it causes widespread congestion and death of the animal by formation of thromboses.

(4) It is precipitated by dilute acetic acid.

(5) It is coagulated by absolute alcohol, but it is again soluble in water or a physiological salt solution even after remaining many weeks in contact with alcohol.

(6) Finally it is capable of decomposing haemoglobin, forming bile pigment and bile acid only, however, in the presence of dextrose or glycogen, at the same time destroying the sugar. An interference with this glycolytic function then must lead to hyperglycaemia and glycosuria; therefore we may safely state that at least one cause of the diabetes milletus is reduction in the sugar splitting process. As to the causes of this perversion of function we do not know, but recent investigations have stimulated us to regard the pancreas as a very important organ in studying the etiology and pathology of diabetes milletus. Seeing the important part played by trypsin in the destruction of sugar, causes the classification of trypsin, under certain conditions, as also one of the glycolytic ferments; therefore it is not strange that removal of the pancreas should cause accumulation of sugar in the blood and its presence in the urine. If trypsin is absent haemoglobin destruction occurs along abnormal lines and no sugar is destroyed. It therefore accumulates. In addition the products of this abnormal katabolism is harmful and circulating in the blood produces many of the symptoms of diabetes milletus. They are protoplasmic poisons, certain albumoses.

Up to this time we are not justified in assuming pancreatic disease in all cases of diabetes, but that some analogy exists in certain cases seems evident. Recent experiments have likewise shown that painting the pancreas with a solution of adrenal gland extract would cause glycosuria and likewise certain inorganic chemical substances as weak mineral acid would produce a similar result.

It is useless to speak of the various chemical tests used for the detection of sugar in the urine, but the most reliable is the fermentative test. Fehling's test is not so reliable, as certain conditions cause the reduction of copper from the cupric to the cuprous condition in alkaline solutions. This condition is called alcaptonuria and is due to the presence of alcapton in the urine.

Transient Glycosuria is a common occurrence of no gravity, but having found it in the urine it would be well for the physician to test the urine from time to time, making sure that it is only a transient condition and do not brand a case as diabetic

after only a hurried examination; but the continual presence of sugar in the urine over a long period of time makes the positive diagnosis of diabetes milletus.

The Doctor Pictured in Literature.*

Annual Essay by Eug. B. Glenn, M. D., Asheville, N. C.

It is my present purpose to speak of the doctor as has been presented in poetry and prose by many of the masters in literature and giving us physicians an opportunity of seeing ourselves as others see us.

By some of our greatest authors and novelists we have been so caricatured that the author has shown that he has grasped the true meaning and importance of our calling. By others we have been crudely, coarsely and inaccurately painted so as to incite ridicule or incorrect abuse.

The oldest of the Hebrew poets has borne witness to the antiquity of the profession in his great dramatic poem, the Book of Job; for poor afflicted Job says to his partial friends that they are "forgers of lies and physicians of no value." But Jeremiah had a better opinion of the profession; for bemoaning the impenitence of the Jews he cries: "Is there no balm in Gilead? Is there no physician there?" by this figure indicating the improvement produced by the presence of one of our craft.

In the "Ingoldsby Legends," a series of satirical stories in prose and verse, written by Richard Harris Basham under the pseudonym of Thos. Ingoldsby, Esq., and published in 1840, we have the story of the "Leech of Folkstone," which gives an amusing incident of a somewhat irascible English squire called upon by a somewhat timid leech, whom he greets gruffly with: "I will no more of your pharmacy; burn, burn,—gnaw, gnaw. I had as lief the foul fiend were in my gizzard as one of your drugs. Tell me in the devil's name what is the matter with me." Then comes the faltering question: "What says your other physicians?" "Dr. Phiz says it is wind, Dr. Fuz says it is water, and Dr. Buz says it is something between wind and water." "They are all of them wrong," said Erasmus Blackthorne, and then goes on to say glibly and smoothly: "It is ever the fate of science to be maligned by the ignorant and superstitious." This illustrates the tendency of the present, sometimes to berate the absent physician. No young physician should be tempted thus to build up a cheap reputation by decrying his predecessors or contemptuously under

estimating the abilities of his professional colleagues.

In the writings of Pilpay we have two fables—one, "A religious doctor," fable VI; the other, "An ignorant physician," fable VIII. In the first we note this quotation: "There are some that bear a grudge even to those that do them good." In the second he relates that "there was once, in a remote part of the East a man who was altogether devoid of knowledge and experience, yet presumed to call himself a physician,"—possibly the Munyon of India.

Where are the tribulations and difficulties of neurological practice and the impatience of the patient better illustrated than by Shakespeare in "Macbeth?" The Doctor says of Lady Macbeth:

Not so sick, my lord.

As she is troubled with thick-coming fancies

That keep her from her rest.

Macbeth: Cure her of that.

Canst thou minister to a mind diseased,
Pluck from the memory a rooted sorrow,
Raze out the written troubles of the brain,

And with some sweet oblivious antidote
Cleanse the stuff'd bosom of that perilous stuff

Which weighs upon the heart?

Doctor: Therein the patient
Must minister to himself.

Macbeth: Throw physic to the dogs:
I'll none of it.

One of the finest descriptions of the surgeon and his work, of students and their manners and methods, has been written by John Brown, a Scottish physician and author, in "Rab and his Friends." In one graphic pen picture we have the amphitheatre—the surgeon a man of few words; the patient with her "unforgettable face," pale serious, lovely, delicate, sweet; her silvery smooth hair setting off her dark gray eyes; her trouble "some kind of an income of the breast," (income, a disease without any known cause); the students rushing pell mell to secure the best seats. "Don't think them heartless; they are neither better nor worse than you or I; they get over their professional horrors and into their proper work; and in them pity, as an emotion, ending in itself or at best in tears and a long drawn breath, lessens; while pity as a motive is quickened, and gains power and purpose. It is well for poor human nature that it is so." The operation without anesthesia, the still silent face of pain; the conclusion of the operation; later, in four days the evidence of sepsis; all has been told by the talented author.

Sir Walter Scott, in Dr. Gideon Gray

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gives us a fine specimen of those village doctors from whom he says Scotland reaps more benefit, and to whom she is perhaps more ungrateful than to any other class of men, excepting the schoolmasters. Such a rural man of medicine is day and night at the service of everyone who may command his assistance within a circle of forty miles of diameter, including moors, mountains, rivers and lakes. But his was not the heart that grudged the labor which relieved human misery; and you will often find in him, even under an unpromising and blunt exterior, professional skill and enthusiasm, intelligence, humanity, courage and science.

In literature we can find illustrations of all types of physicians—the pompous physician, the hen-pecked physician, the timid man, the brutal, selfish type; and the superannuated, antiquated individual who lives upon his former reputation. Bulwer Lytton has described in "A Strange Story" a Dr. Lloyd, zoologist and physician, a tolerably good though never brilliant one, but who in later years rather aged than worked himself into that professional authority and station which it confers on a thoroughly respectable man. Becoming involved in mesmerism, he lost prestige and his chief patient decided that he was cracked, and comments:

"Cracked poets may be all the better for being cracked; cracked doctors are always dangerous," and the young and ambitious Fenwick gets the practice of the community. Beware of fads or cerebral localized hypertrophies. There should be a well rounded development, a symmetrical mental equipment.

When he was called in consultation with Lloyd, Fenwick says: "To me his diagnosis was shallow and his prescriptions obsolete. Doubtless he thought I ought to have deferred to his seniority in years; but I held the doctrine which youth deems a truth and age a paradox, namely, that in science the young men are the practical elders, inasmuch as they are experienced in the latest experiences science has gathered up, while their seniors are cramped by the dogmas they were schooled to believe when the world was some decades the younger.

Euripedes said, 500 B. C., "Man's best possession is a sympathetic wife." The role played by the physician's wife and her influence over him for good or ill has been well described by George Eliot and by Dickens. In the history of Dr. Lydgate in "Middlemarch," George Eliot with her masterly touch shows how a pretty, vain, but narrow woman may stand in the way of all her husband's nobler ambitions. Hear her words: "Lydgate, who had received a

true vocation, whose intellectual passion predestines him to far-resonant action in the world of scientific research, Lydgate, against whom the temptation of the world and the devil would have been idle, is subdued by that third enemy of man, the world incarnated in the form of a creation (Rosamond) with feminine voice, swan-like throat, perfectly turned shoulders, exquisite curves of lip and eyelid, and, hidden behind these, the hardness of a little sordid soul."

Dickens, in "Bleak House," in the wife of Dr. Allan Woodcourt, paints a very different picture, the true, sympathetic wife happy and proud of her husband's work. She says: "We are not rich in the bank but we have quite enough. I never walk out with my husband but what I hear people bless him. I never go into a house of any degree but I hear his praises, or see them in grateful eyes. I never lie down at night but that I know that in the course of that day he has alleviated pain and soothed some fellow-creature in the time of need. I know that from the beds of those who were past recovery thanks have often gone up, in the last hour, for his patient ministrations. Is not this to be rich?"

Turning, now, from fiction to fact, the finest type of the truly sympathetic doctor's wife is perhaps given by the biographer of Oliver Wendell Holmes: "For Dr. Holmes she was an ideal—a comrade the most delightful, a helpmate the most useful, whose abilities seemed to have been arranged by happy foresight for the express purpose of supplying his wants. She smoothed his way for him, removed annoyances from his path, did for him with her easy executive capacity a thousand things which he would otherwise have missed or have done with difficulty for himself; she protected him from distractions and bores and interruptions—in a word she took care of him, and gave him every day the fullest and freest chance to be always at his best, and always able to do his work with cheerful surroundings. If in thus ordering all things with careful reference to the occupations and comfort of her husband, she often gave herself in sacrifice—as no doubt she did—she always did so with such amiable tact that the fruit of her devotion was enjoyed with no disquieting sense of what it had cost her."

The duality of the human composition, the constant warring of the good and bad elements in the individual, the double role sometimes played by individuals of all professions or walks in life, are pictured most vividly and powerfully by the late R. L. Stevenson in his remarkable story of "Dr. Jekyll and Mr. Hyde."

Our American writers have created or described most admirable types of our fraternity both in prose and poetry. Whitman in his unpoetical verse has given us the wound dresser, doubtless describing his personal experience as an army nurse:

"Bearing the bandages, water and sponge,

Straight and swift to my wounded I go,
Where they lie on the ground after the battle brought in,

Where their priceless blood reddens the grass, the ground,

Or to the rows of the hospital tent, or under the roof'd hospital,

To the long rows of cots up and down each side I return,

To each and all one after another I draw near, not one do I miss.

An attendant follows holding a tray, he carried a refuse pail,

Soon to be filled with clotted rags and blood, emptied and filled again.

"From the stump of the arm, the amputated hand,

I undo the clotted lint, remove slough, wash off the matter and blood.

Back on his pillow the soldier bends with curved neck and sidefalling head,

His eyes are closed, his face is pale, he dares not look on the bloody stump, And has not yet looked on it.

"I dress a wound in the side, deep, deep, But a day or two more; for see the frame all wasted and shrinking,

And the yellow-blue countenance, see.

"I dress the perforated shoulder, the foot with the bullet wound,

Cleanse the one with the gnawing and putrid gangrene, so sickening so offensive,

While the attendant stands behind aside me holding the pail and tray.

"I am faithful, I do not give out,

The fractured thigh, the knee, the wound in the abdomen.

These and more I dress with impassive hand,

(yet deep in my breast a fire, a burning flame.")

McClaren has given us that sympathetic picture of "a doctor of the school"—Willie McClure of Drumtochty. "It was impossible for a doctor to earn even a modest competence from people of such scandalous health as those of Drumtochty, and so Maclure had to annex neighboring parishes. His house—little more than a cottage—stood at the head of the Glen and from this base of operations he dominated the wild glen that broke the wall of the Grampians where the snow drifts were twelve feet deep in winter, and the only

way of passage at times was the channel of the river, and the moorland district westward, and lands eastward toward Muirtown. He did his best for the need of every man, woman and child in this wild, straggling district, year in and year out, in the snow and in the heat, and in the dark, and in the light, without rest, and without holiday, for forty years.

"He could ride faster, stay longer in the saddle, and had a firmer grip with his knees than anyone I ever met, and it was all for mercy's sake. When the reapers in the harvest saw a figure whirling past in a cloud of dust, or the family at the foot of the glen in the night heard the rattle of a horse's hoof on the road, they knew it was the doctor, and without being conscious of it wished him God speed. There were no specialists in Drumtochty, so this man was to do everything as best he could, and as quickly. He was chest doctor and doctor for every other organ as well; he was accoucheur and surgeon; he was oculist and aurist; he was dentist and chloroformist, besides being chemist and druggist as well.

"He was a tall, gaunt, loosely made man without an ounce of superfluous flesh on his body, his face burned a dark brick color by constant exposure to the weather, red hair and beard turning gray, honest blue eyes that look you ever in the face, huge hands with wrist bones like the shank of the ham, and a voice that hurled his salutation across two fields; he suggested the moor rather than the drawing-room. But what a clever hand it was in an operation—as delicate as a woman's; and what a kindly voice it was in the humble room where there was weeping beside a patient's bedside.

"His fees were pretty much what folks chose to give him, and he collected them once a year Kildrummie Fair.

"As he had braved storm and drifting snows and rising floods to visit the sick and dying, so his people came from all the Glen through the greatest snow of the century to his funeral; and of him it was said 'we have buried the remains of one who served this Glen with a devotion that has known no reserve, and a kindness that never failed, for more than forty years. He will never be forgotten while one of us lives, and I pray that all doctors everywhere may share his spirit.' As a text for the cross over his grave the pastor of the parish chose, "Greater love hath no man than this that a man lay down his life for his friends." When someone said 'it was a peety he didna mak mair profession 'o releegeion,' Lachlan Campbell, now old and feeble, replied, "When William Maclure appears before the Judge, He will not be asking about his profession; for the doc-

tor's judgment has been ready long ago; and it is a good judgment, and you and I will be happy men if we get the like of it. It is written in the gospel, but it is William Maclure that will not be expecting it. "Come ye blessed of My father . . . I was sick, and ye visited me."

A Case of Intra-Spinal Cocainization with Unusual Features:—Unilateral Anæsthesia Only.

By Henry McKee Tucker, M.D., Raleigh, N. C.

The case which I am about to report is to illustrate a rather peculiar result of intra-spinal cocainization. I believe it is the cases that exhibit peculiarities that we learn most from, and that should be reported and spoken of.

The patient was admitted to Rex Hospital and fell to my service, suffering from gangrene involving the two smaller toes and an adjacent small area of the foot. Briefly stated, her history as follows:

Family and past history negative.

Present trouble: Stuck a square, medium size, rusty nail in the foot, over the head of the metacarpal bone, barely through the skin; nail carrying in a small piece of the leather. Suffered very little pain for two or three days, and continued to walk. In four or five days foot began to pain, throb, swell and become red. Inflammation increased. In about six days toe began to turn black and was lanced three days afterwards. Three days after this she was admitted to the hospital.

On admission to hospital the urine was examined with the following results: Sp. gr. 1041, reaction acid, albumen and sugar in abundance. No casts, no renal epithelium. The patient gave history of habitually passing abnormally large quantities of urine but the exact amount passed daily was not measured.

If I may digress, I will give a brief review of some of the anatomical points of the cord and membranes.

From without inwards we have the dura mater connected at intervals by isolated bands to the delicate arachnoid membrane. Attached above to the foramen magnum it extends below as far as the third sacral vertebra. Beyond this it is an impervious cord. The space between the arachnoid and pia forms the subarachnoid space, largest in the lumbar region, filled with the subarachnoid fluid, in which floats the cord with the pia. The cord is said to be

capable of movement from one-half to one inch. It terminates in the adult at the lower border of the first lumbar vertebra, and is continued as a slender filament, the filum terminale. With the dura laid open opposite the first lumbar vertebra the roots of the lumbar and sacral nerves are seen, forming the cauda equina.

The technique used after Goldan was as follows:

The field of puncture was prepared the afternoon before and the day of the operation as for any other operation. The solution was made at the time of the operation by boiling water in a previously sterile test tube for five minutes; measuring off a drachm of this boiled water one and a quarter grain of cocaine was added making a two per cent solution. This was held over the flame just below boiling for about two minutes. Syringe and needle of course were boiled. The patient sitting perfectly level on the table, bending well forward, the point of puncture was made immediately below, and $\frac{1}{4}$ inch to the right of the tip of the spinous process of the fifth lumbar vertebra, the needle entering the subarachnoid space, the point of puncture corresponding to the space between the last lumbar and first sacral vertebra. It was my intention to go between the fourth and fifth lumbar, entering the skin at a point immediately below and $\frac{1}{4}$ inch to the right of the fourth spinous process, corresponding to a line drawn on a level with the crests of the two iliac bones. Owing to the excessive adipose tissue, it was hard to make out this line accurately, as well as to locate the spinous process, and as stated above I entered the space between the last lumbar and first sacral, instead of between the fourth and fifth lumbar, as desired. The entrance into the subarachnoid space was shown by the dropping of the spinal fluid. After a few drops had escaped, the needle was attached to the syringe and 20 minims of cocaine solution was introduced; the needle after two minutes, was withdrawn, and the opening closed with collodion. In about ten minutes, she complained of a severe headache and a peculiar sensation in her right lower extremity. There was slight anæsthesia at the time. From time to time she spoke of the limb "feeling numb," and said she could not raise it from the table. The first anæsthesia noticed was slight. This gradually increased until there was complete loss of sensation in the unaffected extremity, as high as the middle of the thigh, the anæsthesia gradually decreasing upwards. A sterile needle, stuck down to the bone, elicited no pain, and it was done without the knowledge of the patient, while on the affected side, the left,

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there was at no time more than slight loss of sensation. In about forty-five minutes, sensation began to return, anæsthesia gradually diminished, pulse and respiration slightly accelerated. The patient was returned to her bed, and during the night she complained of considerable pain in her back.

Six days after this, another attempt was made. At this time, the point of puncture was made on the left side, instead of the right, between the fourth and fifth lumbar. Twenty minims of the cocaine solution were introduced with practically the same result as obtained at the former time. After waiting about 20 minutes, 20 more minims were given; still, there was only partial anæsthesia of the affected extremity, and, as before, complete anæsthesia on the unaffected side. The patient's pulse and respiration were accelerated, the pulse small, very feeble, and running up to 140.

Disappointed in not obtaining sufficient loss of sensation for amputation the second time she was again returned to bed with the leg unamputated.

Ten days after this another attempt was made, waiting this length of time for the cerebrospinal fluid to be re-established. In the meantime, the gangrene was slowly extending to the other toes, now involving the great toe. The needle was introduced on the left side at the same level as at the previous trial; *but no fluid returned*. This being the case, it was thought best not to introduce cocaine, as it should only be done when spinal fluid has been seen to drop from the needle. I decided, in spite of the diabetes, to have chloroform administered. This was done, and the leg amputated at the lower third, leaving a long flap. The ends of the flap subsequently became gangrenous, sloughed off and the wound healed by granulation.

Now the question of interest and the one which prompts the reading of this paper is: Why was the right and unaffected extremity, each time, the one to be completely anæsthetized, while the left was never but slightly anæsthetic?

Again, why was it, there was no appearance of the subarachnoidean fluid the last time the puncture was made? Of course it is possible the needle did not enter the subarachnoidean space; yet it was introduced in the same way as at previous times and fully as deeply, and was as freely movable as before.

Before I conclude I want to say that I

am not an ardent advocate of intra-spinal cocainization. In fact, I think it is only in the most carefully selected cases, if at all, that it should be used; and these cases few and far between. While we read of successful cases, we read of some that are the most perfect failures, as well as some exhibiting alarming symptoms. Can any one say that in selected cases (in which general anæsthesia is thought to be contraindicated) the patient would not bear chloroform or ether equally as well? There are few surgeons, who have not given chloroform or ether to patients with cardiac or renal disease without bad effects; and yet some of these are the selected cases for this method of anæsthesia. I believe, that taking even these so-called selected cases, you will have better results on the whole and less trouble with one of the general anæsthetics.

In twenty-six of the cases reported by Goldan two developed pneumonia. May this not have been due to the exposure of the back in the preparation of the patient, to the wet clothes, and the depressed condition of the circulation, which is at first lowered by full doses? Tuffier, for instance reported a case dying of asphyxia, in which at autopsy, a pulmonary thrombus was found, showing the depressed condition referred to.

These two cases, out of Goldan's twenty-six seem to suggest that pneumonia is more common after this method of anæsthesia than from general anæsthetics.

Most of the selected cases for this method are those with some renal lesion; and yet one of the contraindications to cocaine is disease of the kidneys with obstruction to the urinary organs. Again, who can tell which patient has an idiosyncrasy for this drug? Biddle reports a fatal case from eight drops of a four per cent. solution given hypodermically with congestion of the kidneys, brain, etc. Another case is reported where a quarter of a grain, given intra-spinaly caused the most severe and alarming symptoms. The best authorities agree that at times shock is produced from this method, which can be compared only with the most profound chloroform narcosis.

Considering the many disadvantages and the few advantages this method has, there are certainly only a few cases in which it should be preferred to general anæsthetics.

If the statement that, "when any fibres of the spinal cord are destroyed, they are never rebuilt, probably resulting in an ascending or descending degeneration" is true, then he who uses the puncture as high as the cervical region (where the cord is not unlikely to be injured) is more fool hardly than wise, more heartless than brave.

The Surgical Treatment of Chronic Ulcers.

By James M. Parrott, M.D., Kinston,
N. C.

Of all the commonplace diseases which afflict mankind, a foul chronic ulcer of the leg is one of the most disagreeable. The proper treatment of this condition seems to be really but little understood. In my experience most doctors dismiss them with some placebo or at best after a few weeks give them up as incurable. No more erroneous idea can possess the physician. I know of no chronic disease more easily or quickly cured than chronic ulcers, should the proper treatment be employed. This does not consist of salves, powders, lotions, etc. This line of treatment will, to state it mildly, do the sufferer no good.

Chronic ulcers are surgical, and must be treated as such. It is very important, however, to search for the cause, and correct that first. Many of these cases are syphilitic, and in such we must institute the usual antisyphilitic treatment for several weeks at least before operating. The ulcer itself in these cases is usually very foul, and must be curetted thoroughly, particularly the hard indurated edges.

Tubercular ulcers should be curetted if very dirty, and the ragged edges removed. Iodoform locally is a very valuable help and the usual antitubercular treatment must be instituted rigorously.

Anemic patients must be given appropriate attention, and it is important that those with malarial cachexia anemic receive constitutional, climatic and dietetic attention. In other words, we must help our surgical procedure with a proper constitutional treatment suitable for each case, and everyone has some cause in the back ground.

The preliminary preparation or treatment of the ulcer is of some consequence. When these cases are first seen they are generally filled with slough. When practical all of them should be curetted, except perhaps in some instances varicose ulcers. In these, of course, the proper veins must be ligated before the treatment is directed to the ulcer itself.

When for any reason the curette cannot be used, the surface and edges should be cauterized after irrigation with sterile water and peroxide of hydrogen. Brewers yeast, papoid, etc., have been recommended at this stage. I have never had occasion to use them. All necrosed bone must be removed and local eczema cured.

After the ulcer has been thoroughly cleansed, whether at once with the curette or more slowly by other means, antiseptic dressing should be applied from time to time until the granulations are strong and healthy. This is best reached by stimulating them with moist 1-3000 bichloride dressings, used alternately with calomel or subnitrate of bismuth. Personally, I use the bichloride dressing continuously locally for several days, replacing them every 24 hours. When the surface is filled with granulations I dress it with the bismuth for 48 hours, then irrigate and re-apply the moist bichloride as before for 24 or 48 hours. The ulcer is then ready to for the operation.

Many fail in this work because the ulcer is not prepared as it should be. It is most often the case that the ulcer has been improperly curetted or cauterized when this is needed, which is generally the case, though not always so. The edges must be removed and the deepest recesses of the ulcer reached. All suppuration must practically cease before the operation is performed.

Several high authorities have recently advised the entire removal of the ulcer, and that the surface be grafted at once. This is sometimes the most expedient procedure, though I must confess it has several very objectionable features, which outweigh its advantages in most cases. In my opinion auto are hetero plastic transplantation cannot be compared to the Thiersch method of grafting. Though sometimes it may be necessary or best to use one of them. The Reverdin or pin-graft method is a miserable makeshift, and more often fails than succeeds.

Parentetically, I may remark that the Thiersch method of grafting is highly gratifying when practiced after the removal of epithelioma, particularly of the face. The wound heals more, rapidly, the scar is much smaller, and recurrence is perhaps less frequent.

The instruments needed for a Thiersch method of grafting are really very few. It can be done easily with two olive-pointed probes and a razor. Sometimes scissors curved on the flat may be of service. The dressings are equally simple; the only thing essential being clean oil silk, a few pads of cheese cloth, a small piece of absorbant cotton, and two or three roller bandages.

That part of the body (the thigh for example) for which the grafts are to be taken are disinfected, and the ulcer thoroughly irrigated. The ulcer is then shaved very lightly to remove the thinnest possible amount of surface. Should there be a little

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hemorrhage, and there always is, it should be controlled by direct pressure.

The grafts should be as thin as possible, just going down into the papillary layer, and should be large ones. I prefer them an inch wide and as long as the ulcer. They should be transferred at once and directly to the ulcer. Each one should be carefully applied, and all air bubbles and minute blood clots pressed from under them. Grafts should lie edge to edge and slightly overlap the ulcer all around.

A liberal use of sterile normal salt solution frequently applied at the point from which the grafts are taken facilitates their removal, but I have never seen the necessity for floating them in the solution before they are applied to the ulcer. It is much easier to tease them off the razor directly on the ulcer with the probe.

A general anesthetic is usually required but I have operated without it. It is not so painful as one would imagine. I have used cocaine, but do not like it for reasons which are obvious. After the grafts are placed they are covered by two layers of oil silk strips, the second at right angle to the first, and so arranged that the meshes are of sufficient size for the escape of all discharges. Maceration is thus prevented and the surface is thoroughly protected. This is covered with sterile gauze and cotton, and the whole snugly bandaged. It is probably best to remove the first dressing on the third day, though it may remain even longer. The wound is to be irrigated at each seance with normal salt solution. The use of the oil silk should be continued until the grafts are thoroughly united, and then bismuth substituted to prevent undue maceration. The drying powder if continued too long will harden the tissue too much and must be used with some caution.

The grafted surface must be protected for some time by any simple surgical dressing. The areas from which the graft are taken are at once dusted with bismuth and always heal kindly and promptly.

In reviewing my work I find that I have never had but one to fail, and that in a very old and decrepid subject. Even he was much benefited. There is no question but that this treatment is by far the best for chronic ulcers. It is practically absolutely sure to cure, and to cure promptly, with never a recurrence. The Thiersch method is far superior to that of Wolff or Reverdin for chronic ulcers.

From my case book I report the following cases each representing its own type of ulcers.

Case I.—Miss H. Age 17, family had personal history negative. Seven years before consulting me she bruised her leg,

which soon resulted in the formation of an ulcer. A short time afterwards another of traumatic origin developed on the other leg. She was very anemic and much debilitated. When seen the ulcers were very foul. Appropriate tonics were prescribed, the ulcers curetted and irrigated. Bichloride dressings were applied and continued, occasionally alternating with bismuth, for three weeks. The ulcers were then grafted with perfect success. Four years latter there is no recurrence. These ulcers were of three years standing.

Case II.—S. 21 years old, white. Family history negative, himself syphilitic. Four years before I saw him he developed an ulcer of the anterior aspect of the leg. When seen the ulcer was foul, ragged edges and covered with lymph. Flax seed and charcoal poltices were ordered, and antisiphilitic treatment begun. Later the ulcer was cauterized and dressed as usual with bichloride 1-3000. Fifteen days later the ulcer was grafted in the usual manner, and in a short time the patient was discharged cured.

Case III.—Was a varicose ulcer of the usual type. The ulcer was dressed antiseptically, and the veins ligated. Afterwards the ulcer was curetted and treated as before described, and later skin grafted. The patient was permanently cured.

IV.—I quote from an article along this line published by me in the Medical News in 1897. "I was called in consultation to see W. H. T., who exhibited an irritable ulcer, the leg being much swollen and very painful, the patient's temperature being 102.5 degrees F. The ulcer was apparently healthy, but very densely red, the slightest touch causing acute pain. Save a slight malarial cachexia, the young man seemed to be in good health. The ulcer was of six year's duration. A moist bichlorid dressing (1-3000), preceded by the application of a four per cent. solution of cocain, was applied, and rest in bed, with slight diet, ordered. He was given an iron tonic, with Fowler's solution of arsenic. Improvement was very rapid, and eleven days after seeing him I grafted the ulcer by Thiersch's method, with perfect success."

Case V.—Is very interesting. Though not coming particularly under the title of my paper I report it at this time, since it shows one of the beneficial uses to which the Thiersch method of skin grafting may be applied. I again quote from the above mentioned article. "J. L. N., aged 75. When seen this patient had an ulceration about the size of a silver dollar on the left temple, midway between the outer canthus and the ear. A diagnosis of epithelioma,

which was afterward confirmed by the microscope, was made. He readily consented to its removal, which was done the following day. Immediately after the operation the surface was grafted by the Thiersch method and the patient was discharged, cured, almost without a scar. The whole treatment occupied ten days."

In conclusion, I may say that most all cases were treated by various methods by almost as many doctors with absolutely no success. Seventy-five out of a hundred ulcers receive no benefit from the usual mechanical treatment, while 99 per cent. can be cured by the simple operation known as the Thiersch method of skin grafting, if the ulcer is prepared and the operation, and the after-treatment directed as it should be.

A Report of Cases.*

By A. S. Pendleton, M.D.

It is my purpose to report briefly two cases of appendicitis which were of special interest to me on account of the peculiar difficulties of diagnosis and as you will see in neither was a correct one made till after operation.

Case 1.—J., male. Age 27. Family and previous history negative. Attack was sudden and violent, beginning with intense pain in right hypochondrium extending backward and upward to right scapula and accompanied by vomiting, first of contents of stomach, and then of mucus and bile.

The point of greatest tenderness was just below the ninth costal cartilage. Frequent micturition with vesical tenesmus was a prominent feature of the case in the beginning. With the exception of lowered specific gravity the urine was found to be normal.

Temperature 99.4-5 F., pulse 102. A diagnosis of biliary colic was made and the usual treatment instituted with apparently happy results at first; but on the third day there was a return of previous symptoms together with a severe chill followed by high fever and a profuse sweat. When seen at 3 P. M. the temperature was 103.4-5 F. Pulse 110 and there was slight jaundice.

There was a daily repetition of chill, fever and sweat accompanied by pain and tenderness in the region of the liver and by nausea until four weeks later when the writer was called in consultation.

At this time the condition was as follows:

Patient greatly emaciated, slightly jaundiced, and very weak. Temperature 103.3-5. pulse 120 and dicrotic.

On examination a large tumor filling the whole of the right side of the abdominal cavity could be readily outlined and fluctuation easily detected. Diagnosis of abscess, most probably of the gall bladder, was made, and, with that belief, the operation was begun by making an incision just below the costal margin. On opening the abdomen, the abscess was found to have no connection with the gall bladder or liver substance though it extended up to and passed against the under surface of the latter but was behind the caecum. After examination through the anterior wound it was seen that the sac could be opened and drained extra-peritoneally by making an incision in the loin, and this was accordingly done, when two and one-half quarts of foetid pus were removed from the cavity and it was irrigated and packed.

What appeared to be the stump of a gangrenous appendix was found projecting into the sac and the condition was therefore evidently due to a suppurative appendicitis, the appendix being retro-displaced and pointing toward the liver.

Case 2.—X. Female age 24. Neurotic and lithæmic. Patient was "quite well at 9 P. M." but shortly thereafter the attack began with violent pain in right lumbar region extending downward to the bladder and this was accompanied by vesical tenesmus and a frequent desire to urinate. A history of frequently recurring attacks of "nephritic colic" was elicited and the present was diagnosed as such and treated accordingly.

The next day the pain was not so severe but required morphine to control and there was tenderness in the loins. The point of greatest tenderness being midway between the crest of the ilium and the 12th rib and three inches from the medium line of the back.

The urine contained pus, blood and a great excess of urates and uric acid. Temperature and pulse normal.

The pus and blood disappeared from the urine on the 4th day; the pain continued, though not so severe, and the tenderness was greatly increased. Nausea was never a prominent symptom.

On operation the trouble was found to be caused by a chronic recurrent inflammation of an appendix situated behind the caecum and pointing upward. This is the report I obtained from the surgeon who performed the operation who added that it was his opinion till the operation was begun that he had to deal with a pyelitis due to the presence of stone.

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The diagnostic significance of bladder symptoms in suspected appendicitis has already been brought to the attention of the profession, I believe, but in these two cases they would seem to have been of a special importance although in the last case they may have been largely due to the excess of urates and uric acid in the urine. You have observed no doubt that in neither of these cases was McBurney's point that of greatest tenderness.

In my experience with appendicitis the bladder symptoms have always been more or less prominent and I would be glad to hear from you as to your opinion in regard to their diagnostic importance.

Inebriety, The Necessity of Legal Adjudication and Restraint of Inebriates.*

By Chas. Duffy, M. D., Newbern, N. C.

Mr. Chairman:—To the humanitarian on-looker of the events of every day life, no evil stands out in more glaring prominence or grotesqueness than the whiskey drink-evil. As an illustration it is said "the drink bill of the United States in one year, is nine hundred millions of dollars;" nine-tenths of all the crimes committed, it is estimated are traceable to whiskey as a cause: four-fifths of all pauperism and about one-fourth of all cases of insanity. And when to these are added the number of idiots, imbeciles, and degenerates, that follow in its withering wake, and then the fruitful transmission of hereditary tendencies to the above enumerated curses, its effect on the family, on the intellect, on society, on the state in the care of the disabled and alienated, it stands out in destructive proportions of the most appalling kind.

It is universal experience of right thinking men that "life is poisoned by it, the home is poisoned by it, politics are poisoned by it, society is poisoned by it" and yet in the face of this arraignment we find physiologists still wrangling over the question as to whether alcohol is a food or a poison.

In June 1899 Prof. Atwater of Wesleyan University, reported before the Middletown, Conn., Scientific Association, some experiments performed under his directions made with the purpose of ascertaining the nutritive status of alcohol, by which he found that a part of the stuff was oxidized in the body. Basing his definition of a food on this hypothesis, he placed alcohol once more in the category of foods.

To do him justice he limits the quantity masquerading as a food to two and a half

ounces a day. Up to the time that these experiments were made, most physiologists were agreed that it had little or no food value in any quantity, therefore it is not surprising that Prof. Atwater's conclusions brought consternation to the camp of the antialcoholic hosts, and some criticisms not very complimentary to the Professor have been indulged in. Amidst a storm of protests against his classification, one of Prof. Atwater's critics characterized this alcoholic food as the "food of hell," and when I see how our criminal records and penitentiaries, our jails, our poor-houses, etc., thrive and fatten on it, I am disposed to agree with him. A food that lets into the fireside the chilly blasts of despair and want that drives the mother and children penniless into the streets, could hardly be classed as a healthful food. What addition does it make to the human body? Does it increase actual strength or muscular tissue? Granted that it increases the fatty tissue, is blubber of much value in any race or contest requiring the best physical condition? The giant John Sullivan might answer. Every one knows that if a man takes a drink of whiskey when he is cold or tired, he momentarily feels warmed and refreshed, but does not the tired horse feel the same stimulant effect when stricken with the lash? It is a cheat, a delusion, the same delusion which it shows when it makes the weak man feel he is a giant, or the poor man feel he is a Cræsus, or the fool feel he is an intellectual brilliant.

Numerous experiments have proved that men endure fatigue and exposure to cold better, accomplish a greater amount of muscle work, without alcohol than with it, that even in small quantities it diminishes the mental functions, increasing the number of mistakes made, lessening the power of concentration, reflection, the association of ideas, the memory and logic.

Let us now revert to another phase of the subject where as medical men we are specially interested, I refer to alcohol as a factor in the causation of disease. For years through our Boards of Health and as individuals, we have been waging war against the pestilences, contagions, and infections. Along these lines we have done service in the cause of humanity which can never be remunerated or sufficiently appreciated. We jump on the typhoid bacillus with both feet wherever we find it. We go for smallpox, yellow fever, cholera, etc., the moment they make their appearance in our midst, with federal, state, and municipal forces, at our back, and we generally vanquish them. Do you think these pestilences are more harmful than whiskey drinking? Need I ask you to run over the list of organs in the

*Reac before the North Carolina Medical Society, June 10, 1902.

human body and try if you can pick out one that is proof against the baleful influences of continuous whiskey drinking? Cannot you recall from your experience many cases of cerebral and other organic degenerations, spinal trophic affections, ataxias, apoplexies, diseases of the lungs, liver, stomach spleen, kidneys, generative organs, and the train of disorders consequent on these diseases, that were directly traceable to alcohol as a determining cause? Then it is equally potent as an indirect cause, for example the otherwise sane and moral man under the influence of liquor will expose himself to the contagion of syphilis and other destructive and loathsome diseases, accidents of all kinds, etc.

I know you can refer me to instances of very old men who have drank whiskey all their lives, and have remained comparatively healthy, but I might rejoin I have known men who have been through many hard fought battles and have come out without a scratch: These exceptions do not carry with them the inference that these occupations are free from danger or conducive to long life. If the infringement of the laws of nature without exception, were summarily followed by the enforcement of its penalty, there is scarcely a question that these laws would not so often be violated. If every man who goes into battle should be killed, there would soon be no more wars. Sane men do not usually take the exceptions to the rule, as the guide of their conduct.

I do not wish to be understood as denying that there is any useful place in the economy for alcohol, on the contrary I admit it has its place as a medicine, and in the arts. Like strychnia, opium, arsenic, etc., there are conditions in which most physicians feel it is indispensable. It is not the legitimate use of this or any other poison I object to, but the indiscriminate or habitual use of it as a beverage, with the mistaken notion that it is good for all the ills that the flesh is heir to. This notion when it dominates the victim usually bears him on to confirmed inebriety, where he loses all self control, and where he is pursued by an irresistible thirst for liquor.

This drink craving as we all know is one of the most difficult conditions to overcome the physician has to deal with, and on this account if for no other reason, we should heed our responsibility in the premises.

In prescribing it we should give no more than the necessity requires, always hedging about its use with warnings of its subtle and dangerous consequences when continued beyond its strictly medicinal purposes.

But I need not continue to discuss the

demerits of alcohol before this audience, I have already said enough to fix it as the king of evils: and I think it is not hard to reach the inference that you have not on your list of preventable diseases, any one more far reaching or destructive in its influences than this one now under consideration.

Do we not owe it to ourselves and the high purposes of our calling to put fourth our hands on the body of this monster and shear him of his power? Is there any sound reason why we should trouble ourselves about small-pox, yellow fever, and such like plagues and let alcohol go unnoticed.

Mr. Chairman, I believe the Medical Society of North Carolina is strong enough to grapple with this monster. Fifty years ago you set out to give the people of the state good doctors, and to-day at every cross-road or back-woods country section you can find them, the equal of those in the cities. You then turned your attention to the sanitary needs of the people, and although the difficulties in the way seemed almost insurmountable, you have to-day a Board of Health doing glorious service to the state. I had the honor, Mr. Chairman, to be one of the committee who organized this board and formulated the list of diseases concerning which your inquiries and investigations are now being made. I am sorry sir to confess that this list is incomplete, and respectfully ask that you amend it, and place thereon inebriety or alcoholic intoxication, that your reports may show the part this agent plays in the death roll of our state. And in the name of good morals, in the name of good government, and in the name of the women and children who writhe under its galling yoke, I ask each member of this Society to put fourth his unrelenting efforts to stay the march of this chief of scourges of the human race.

And what can be done for the inebriate himself? No matter how good a man he may be when sober, he is as a rule, unsafe to be left to go at large in the community when under the influence of liquor. He is an irresponsible and dangerous man. He is cruel to his beast, or his best friend, insisting often that he is not drunk, or may be that he has "not touched a drop in a week." In this condition and when openly committing acts of violence, the state may arrest him under a criminal process, but as is too often the case, acts of cruelty and violence committed in the home away from the observance of the eyes of the law, where the victims are his helpless wife and children, go unpunished and unrestrained. Such a man if no more than one remove from a fiend, when in his sane condition would bless the hand that would re-

restrain him from such brutality and violence. Can there be any satisfactory reason why such a man should be left to pursue his murderous tendencies while the insane or criminal of another class are taken into state custody and restraint? This inconsistency was recognized by the state authorities many years ago, when an enactment was passed: Public Laws North Carolina, 1879 providing for the arrest and control of inebriates in certain cases. Sec. 1671 of these laws defines an inebriate as "Any person who habitually whether continuously or periodically indulges in the use of intoxicating liquors to such an extent as to stupefy his mind and to render him incompetent to transact ordinary business with safety to his estate, shall be deemed an inebriate within the meaning of this Chapter: Provided the habit of indulging in such use shall have been at the time of inquisition of at least one years standing."

This definition seems insufficient to meet the requirements under consideration in this paper. Many inebriates have no estate and therefore would not come under the provisions of the act, besides his own person, his family and his neighbors, should have at least the same protective care of the state, as his goods and chattles. To cover this defect I submit the following as an amendment to this section: To wit: Be it enacted that section 1671 of the code be amended by striking out the word "to" in line two and the remainder of said section, and inserting the words to such extent, either periodically or continuously, as to render him incompetent to transact his ordinary business with safety to his estate, or to render him obnoxious or dangerous to his family or to the community, or which periodically, at intervals or continuously renders him cruel to or neglectful of his family, shall be deemed an inebriate.

Sec. 2. That wherever the word inebriate is used in said chapter, or in any of the laws amendatory thereto, it shall be construed to mean, any person who habitually whether continuously or periodically indulges in the excessive use of intoxicating liquors or narcotics.

With some such statute as this, many cases of inebriety could be reached which are now without the pale of the law. Humanity and sympathy for the poor victim of this uncontrollable vice, cries aloud for such supervision and control as will restrain him from the continued indulgence of his morbid appetite; thereby placing him beyond the reach of the means of destroying himself, or continuing a menace and a nuisance to society at large.

If a man should steal a chicken or a

water-melon, only one time, the dignity of the state is offended, and no matter what has been the moving cause, whether to appease his hunger or to feed a starving family, he is adjudged a criminal, and it may be sentenced to the penitentiary, the asylum for the cure of crime, not with the purpose of torturing him or vindictively punishing him but with the purpose of correcting his criminal tendencies and returning him to the community a reformed and law abiding citizen. Very few people question the corrective agency of this institution, very few can doubt the propriety and justice of thus arresting and restraining the criminal. Do you know why? It is not that these unlawful acts as defined by the code have long been held as infringements of personal rights and violations of the moral code? Now when you compare the many cases of petit larceny, that are so promptly dealt with and are so largely the care and concern of the police regulations of the state, with the consequences of whiskey drinking, and especially the part it plays in such acts as are usually overlooked by these authorities, are you not driven to doubt the even-handedness of justice, as now outlined by our penal code, in dealing with these conditions? Bear in mind, Mr. Chairman, that it is not the purpose of the context of this paper to punish the inebriate because he indulges in the excessive use of liquor, but to hinder or prevent him from becoming a criminal before the law, to restrain him from further indulgence in a habit that will of necessity result in his committing acts of violence and other crimes, to cure him and restore him to a condition of sobriety and decency. Examined from this standpoint the proposed definition of an inebriate cannot be construed as abridging his private liberty, further than is absolutely necessary for his own, and the public welfare.

The establishment of well regulated Inebriate Homes under state supervision, for the care of such cases, would most probably work incalculable benefit both to the inebriate and to the state.

The inebriate himself would bless the hand that would thus stay his cause downward to predition and despair. His poor wife and children would sing praises to the power that would send back to their home a regenerated normal human being, in the place of a fiend, and the gain to the state, of converting one drunkard from every county, into a useful citizen, cannot be computed.

Retention of Urine*

By A. J. Crowell, M. D., Charlotte, N.C.

Mr. President and Gentlemen.—As Chairman of the section of Pathology and Bacteriology, I should give you a report of recent investigations in these branches, but on account of circumstances over which I had no control, I have been unable to do this. Therefore, rather than to fail to prepare a paper at all, I decided to get up a practical one on a trouble with which every general practitioner, as well as the specialist, is constantly confronted.

Retention of Urine.

Retention of urine is the inability to empty the bladder.

This is a trouble of frequent occurrence, often over-looked, and far-reaching in its results, as I shall endeavor to show you later, and usually very poorly treated.

The wonderful power the kidneys have to take from the circulation, and eliminate from the body toxic substances, which if allowed to remain in the circulation would soon destroy life, makes this organ one of vital importance. Anything interfering with the excretion materially hinders the secretion of urine.

Retention of urine is due to atony, paralysis of the detrusor muscles, spasm of the sphincters—usually reflexly—and obstruction at the neck of the bladder or in the urethra. Whatever interferes with the vesicle centre in the spinal cord, such as locomotor ataxia, Pott's disease, general paralysis, sclerosis or cerebro-spinal injuries, causes paralytic retention. The muscles may be directly paralyzed by inflammation extending from the mucous coat or peritoneal investment (due to peritonitis) over distention or degeneration of muscular fibers caused by prolonged or exhausting diseases.

Spasmodic retention may follow shock or injury, operation on the spermatic cord, rectum, testicles, or prolonged voluntary retention, hence the importance of watching the bladder and using catheter for a few days following such operations. Obstruction may be due to tumor, impacted stone, clot, foreign body, prostatic hypertrophy or inflammation. Retention may be of sudden or gradual onset, and may be partial or complete.

Sudden and complete retention is seen in cases of rupture of the urethra, impacted stone or reflexly following operations, etc. In these cases the symptoms are so plain that a diagnosis is easy. These symptoms are: steadily increasing pain, a constant desire to urinate with recurring and un-

vailing efforts, tenderness over the bladder, with tumor, dull on percussion, globular in shape, and often extending up to the umbilicus. Rectal and supra-pubic palpation shows the presence of a fluctuating tumor in the region of the bladder.

Gradual retention may develop so insidiously that it is not detected until direct examination shows the presence of a distended bladder. This form of retention is due to urethral stricture, atrophy of the detrusor muscles, lesions of the cord, intra and extra cystic bladder growths, or inflammations and enlargement of the prostate gland.

Since the bladder is always partially filled with residual urine, the first symptom noticed is frequent urination, with but little force, which diminishes toward the end of urination, and usually with much diminished volume.

Even if the vesicle muscles are healthy, the flow of urine is so obstructed that the time required to empty the bladder is so long that the voluntary detrusor muscles become tired and relax before the bladder is entirely emptied and leave a certain amount of the urine in the bladder. The residual urine is proportionate in quantity to the degree of obstruction encountered in the urethra, vesicle neck and to the loss of tone of bladder muscles. When sterile and moderate in amount, the only symptom it causes is frequent urination. The cause of this is obvious. The bladder can retain comfortably only about ten ounces of urine, and if five ounces are left in the bladder after each urination, the kidneys will have to secrete only five more ounces until the bladder will have to be emptied again.

Because of the unrest and irritation of frequent micturation with more or less sustained tension, when the residual urine exceeds from four to six ounces, chronic congestion is the result. This is often greatly augmented by cystitis and fermentation of the stagnant urine.

As the obstruction increases and the muscles become atonic or atrophic from whatever cause, the bladder is more and more distended until it becomes enormously dilated. When this gradual retention occurs in the course of fevers, it is due to degeneration of the detrusor muscles and to abolition of the normal reflexes. The sphincter muscles give way as the bladder distends and this is followed by incontinence. Incontinence of urine should always lead to examination for an over distended bladder. Whether the retention is complete or incomplete the intro-vesical tension is abnormal and far-reaching in its results.

Effects of Retention.

As previously stated it has been shown

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experimentally that even a moderate amount of residual urine, say three or four ounces, causes distinct vesicle congestion, which if not relieved will be followed by bloody extravasation, involving often the whole thickness of the bladder walls, and pronounced epithelial desquamation. This pathological condition is not confined to the bladder, but extends into the ureters, kidney, pelvis and tubes of the kidney. Echinomosis in the parinchymatous portion of the kidneys is often very marked.

When the detrusor muscles are paralyzed, the bladder remains absolutely flacid, even though the urine be drawn. The desquamation of the epithelium from the bladder, ureters and kidneys, which, when unbroken, prevents absorption from the genito-urinary tract, exposes the lymph and blood channels, and allows the absorption of toxic substances, and when the bladder is infected, rapidly extends up into the ureters and kidney pelvis, and instead of a simple retention, you have to contend with pyelonephritis. It is not until acute retention has lasted more than twenty-four hours that the bladder, prostate, ureters and kidneys are enormously congested. At first the kidneys are excited to increased activity, and as the pressure increases, secrete slowly or not at all. In such a condition you can readily see that the whole urinary tract is ripe for infection; absorption takes place readily and the normal excretion of toxins is inhabited.

Chronic retention, which of course is incomplete, produces pathological alternations of less immediate danger than those of acute retention. When the retention is moderate, the changes are limited to the bladder, but if it is as much as six ounces, there is chronic congestion of the entire urinary apparatus, with pronounced susceptibility to infection. Fever, if present, is usually due to infection, and temperature is normal or sub-normal in both acute and chronic retention. There is more immediate danger in acute than chronic retention, but the ultimate results are the same.

Relief of retention, in both acute and chronic retention, is called for as soon as possible; and should be done with the utmost antiseptic precaution. Sudden evacuation of the bladder, in cases of chronic retention, often causes hemorrhage from the bladder and kidneys as well as into the substance of these organs. This is less liable to occur in acute than in chronic retention. It is due to sudden relief of pressure to which the engorged vessels have long been accustomed; and because of this fact the bladder should not be emptied entirely at first, but be replaced by a normal salt solution, and the amount of fluid in the bladder should

be gradually reduced until it can be entirely removed. The evacuation of the bladder often so completely relieves congestion that the power of micturition is restored; and especially is this so in acute retention, but usually catheterization must be continued for some time, and as often as necessary; this depending on the activity of the kidneys and the amount of residual urine, not allowing more than ten to twelve ounces to accumulate before being drawn.

Prostatic Retention.

From an etiological standpoint, White and Martin classify retention of urine as follows:

1. Retention due to paresis or incoordination of the bladder muscles.
2. Retention from congestion or acute inflammation.
3. Retention due to blocking of the urethra by clots, foreign body, stone or portions of new growths.
4. Retention caused by prostatic enlargement.
5. Retention caused by stricture.
6. Retention due to traumatism.

For want of time I shall briefly call your special attention to only three of these six general causes.

1. Retention due to paresis or incoordination of bladder muscles

This form of retention is due to failure of the detrusor muscles or loss of control over the sphincters, and is common in cerebral and spinal cord injury or disease, shock, hysteria, peritonitis, exhausting diseases, voluntary retention, paravesical inflammation and following operations on the rectum and spermatic cord. The symptoms and diagnosis of retention have been referred to above, and I shall say here only that when retention develops without apparent cause and with no previous history of urethral or bladder trouble, close search should be made for ataxia. In every case of retention careful examination should be made for stricture and enlarged prostate regardless of the history obtained.

Treatment.

Retention caused by hysteria is usually relieved by hot enemata, followed by hot sits bath; the patient being instructed to pass the injection while still in the bath. This treatment is usually efficient in anal operations, inflammation, shock and voluntary retention, but usually the catheter should be used for retention following anal operations, and always for that due to any of the above causes if relief is not obtained from the use of the hot enemata and bath, and not trust to medicines.

When a catheter is to be used the same

care should be exercised by the surgeon as if he was going to perform a major operation, since the intense congestion of the bladder and proliferation of epithelial cells make the bladder and kidneys very susceptible to infection. The surgeon's hands should be thoroughly cleansed, the patient prepared as if for a major operation, penis down through a slit in a sterile towel, urethra irrigated with a mild antiseptic solution; then a No. 16 F. rubber catheter is lubricated with sterile oil and passed into the bladder, and if the retention is acute and of short duration, all the urine may be withdrawn, but if chronic not more than eight or ten ounces at most should be drawn off. Then the bladder should be irrigated with a normal salt solution by putting into and withdrawing from the bladder a certain amount of this solution, say from four to six ounces, and in this way displace the remaining residual urine with the normal salt solution. Boracic acid is better if cystitis is marked.

If the bladder is suddenly emptied, and especially if there is infection, severe hemorrhage, involving the kidneys and their pelves, is liable to occur causing partial or complete suppression of urine and death. When retention is due to central nervous lesions, as in ataxia, Pott's disease, or to muscular degeneration, as in typhoid fever or arterio-sclerosis, regular and frequent catheterization is indicated. Because of the hyper-secretion of the kidneys from the undue pressure to which they are accustomed, it may be necessary to catheterize from four to six times in twenty-four hours. The bowels should be regulated by enemata or salts. In all these cases urinary antiseptics, such as salol, urotropin, and cystigen should be given by the mouth, and strict attention paid to hygiene and diet.

2. Retention of urine from stricture.

This cause must be distinguished from that of enlarged prostate since the treatment of the two differ greatly. In both cases we have frequent urination with slowness in starting the stream. The urine flows easily and with little delay during the day in prostatic, but at night and early morning with less ease and more frequency. Rectal examination usually shows enlarged prostate when due to prostatic. Frequency is most pronounced during the day in stricture; less delay in starting the stream and usually more dribbling. There is distinct remission of symptoms at night until retention is well advanced. Congestion produced by excess in drink, sexual indulgence, chilling of the surface, passage of a catheter or sound, may cause retention at any time. It may develop from same cause in case of stricture of large caliber without

preceding history of frequent urination. The Bladder is usually hypertrophied, and when there is only a small amount of residual urine on account of the undue tension, the surgeon is generally called early.

Diagnosis.

The diagnosis is founded upon the exploration of the urethra with acorn bougies, introducing first the largest the meatus will admit, and gradually reduce the size until you pass the obstruction and thus locate the strictures and ascertain their caliber.

Treatment.

Spasm and congestion being the principal causes of acute retention from stricture, the hot bath, hot enemata, opium, and belladonna suppositories are often found sufficient. Should these fail you should promptly catheterize. A number 18 or 20 French sound may be introduced into the bladder. If this fails, fine conical and rat-tail soft catheters should be tried next. If these fail filiform bougies should be used; gently manipulating until one enters the bladder, and if only one can be introduced it may be tied, with the full assurance that enough urine will leak out to relieve tension, and that the stricture will be sufficiently softened in a short time to admit a larger instrument and the urethra gradually dilated. If all these fail, then aspiration is indicated, followed by perineal section and cutting or forcibly dilating the stricture.

3. That due to prostatic hypertrophy.

It is strange, that until half dozen years ago, a disease occurring in from 22 to 30 per cent. of all males past middle life, and capable of producing so much suffering and so great mortality, has received so little attention at the hands of the medical profession. It has been recognized since the days of Hippocrates, and the same chain of symptoms given, but with no past treatment save the catheter. During the half dozen years the profession has awakened to the great necessity of a better form of treatment; one that would promise the sufferer more than the average of four years which statistics show to be the average length of life of an individual after the prostate so obstructs the outlet as to require the use of the catheter.

Of all the forms of urinary retention that due to prostatic hypertrophy is the most frequent; and in order to discuss the treatment intelligently it will be necessary to look into the etiology and pathology of prostatic hypertrophy somewhat closely. These are not as well understood to-day, it seems, as might be; but with the present light before us, as the result of the untiring energy and research made during the

last six years by Motz, Albarron, Guyon, Harrison, Ciencanowski, Green, Brooks, Hugh H. Young and others, may we not justly look forward with hope and expectancy to that day in our generation when those near and dear to us, bowed by years of toil and care, may be enabled to lie down and sleep calmly and peacefully as a little child, so far as prostatic annoyance is concerned, and thus make that period of life, so much dreaded to-day by the aged, free from the suffering and ill health produced by prostatic hypertrophy.

This gland is composed of 30 or 40 compound racemose glands imbedded in an abundant stroma of connective tissue and broad, short cells with avoid nucleoli. These muscle fibers are so arranged as not to act as sphincter or accelerator urinae.

Green and Brooks reported in "The Journal of the American Medical Association," which came out April 26th, the results of a series of 58 cases microscopically examined by them, with the view of determining the most frequent cause of prostatic hypertrophy—which I would advise of each you to read carefully—with the following results:

1. They found abundant evidences of inflammation in every gland.

2. The same gland often showed several different types of inflammation, though the most common one was interstitial hyperplasia, followed by atrophy of the muscle cells of the gland,

In 41 of these cases the increase in size was chiefly or entirely due to fibrous proliferation, but in 36 cases inflammation played a leading role, and in 19 cases cystic distention of the aveoli was present in sufficient degree to increase the size. In six, tumors were present; three fibromy from the interstitial tissue and three from the epithelium-epithelioma. No cases of true glandular or muscular hypertrophy were present.

As stated above, interstitial hyperplasia is the most frequent cause of hypertrophy, and this is recognized generally as being produced by inflammation. In all organs, acute and sub-acute inflammation gives rise to hyperplasia, and especially is this so in the prostate gland, as it is an organ abundantly supplied with blood vessels and highly cellular connective tissue.

With the cessation of acute inflammation following a removal of its cause, interstitial hyperplasia should cease and retraction and atrophy follow from the sclerosis of the fibers. Such is the result in favorable cases of prostatitis in the young, and we have as a result the atrophic or small hard prostate. In the middle aged or old man, where we have more or less arterial sclerosis, resolution and healing do not take place so read-

ily, and instead of cessation of connective tissue hyperplasia, the condition becomes chronic, the blood vessel and lymphatic walls are thickened, the gland is congested, edematous, with proliferation of epithelial cells and continued hyperplasia. As the result of overgrowth alone, when continued for a long time, we have prostatic hypertrophy. If the fibrosis be marked in the peripheral portions of the gland the walls of the alveoli are encroached upon, thickened and obliterated. If hyperplasia is most marked in the central portion of the gland, we have occlusion of the ducts. The glandular epithelium continuing to secrete, distention of the acini and alveoli takes place, hence the familiar cystic adenoma of the prostate.

Surgeons and pathologists admit that such conditions predispose toward cancer of the mammary gland, then why not expect the same thing in the prostate gland where you have chronic interstitial proliferation compressing and irritating the alveolar epithelium?

The conclusion reached by Green and Brooks in the study of their 58 cases was that most frequently postatitis is due to posterior urethritis, and prosterior urethritis is usually, primarily or secondarily, of gonococcic origin; and that the prostatic hypertrophy is a direct result of chronic prostatitis. Then by the same chain of evidence we are forced to the conclusion that it follows posterior urethritis from whatever cause.

They briefly sum up their conclusions as follows:

1. "Prostatic hypertrophy in the aged is the result of chronic prostatitis.

2. It most frequently arises from chronic posterior urethritis, of whatever cause.

3. True neoplasms of the prostate are rare and are not concerned in the production of prostatic hypertrophy.

4. Carcinoma is apt to occur in the hypertrophied prostate as a result of the chronic inflammatory process."

Symptoms.

In prostatic enlargement as the growth increases, elevating the vesicle orifice there is partial retention, a certain amount of urine is left in the bladder after each micturition, which, if sterile and does not exceed four to six ounces, causes no symptoms save increased frequency of urination and the habit of rising once or twice in the early morning to empty the bladder. As the obstruction increases the amount of residual urine increases, the desire to urinate more frequent and more urgent, with slowness in starting the stream and especially at night and the stream is projected with less

force. Finally the walls of the bladder give way to the increased tension and the viscus becomes greatly dilated. If the retention is sufficient to distend the bladder and dilate the ureters and kidney pelves, we have albumen, epithelium, blood, pus, and tubes casts in the urine and especially is this the case when we have infection. This dilatation, of course, involves the ureters and kidney pelves. The secretion of the kidneys is interfered with and uremia develops, characterized by gastro-intestinal disorders, and finally death ensues. When distention is great, we have constant dribbling of urine. Should infection take place and cystitis intervene, the vesicle symptoms are very much augmented. Pain and tenesmus are then added to the frequent micturition. If the enlarged prostate become suddenly congested in the course of incomplete retention from infection, exposure to cold, sexual excesses, or from whatever cause, there will be acute retention with the usual symptoms of acute retention which are referred to above. [Occasionally we have seen perineal pain or pain just back of meatus, and especially is this so in acute prostatitis. It is seen in men past middle life. There is a history of frequent urination with night rising to empty the bladder.] Rectal examination shows an enlarged prostate.

On passing the catheter, the urethra is found to be abnormally long. This should be about eight inches and is measured by passing a catheter in till the urine begins to flow, then withdraw and get the length of catheter from the meatus of penis to the eye of the catheter. A full bladder may be recognized and certainly so if retention is marked. The withdrawal by catheter of residual urine immediately after micturition with the above symptoms is sufficient for a diagnosis of prostatic enlargement; but if further evidence is desired the use of the cystoscope will reveal the exact condition of the gland. The cystoscope should always be used before doing any operation on the prostate gland, and especially so before doing the Botini operation, in order to get a mental picture of the vesicle portion of the gland, determine the number of incisions to make and their location.

Treatment.

Posterior urethritis and prostatitis, being the most frequent cause of prostatic hypertrophy, should not be allowed to become chronic, and thereby eliminate the greatest cause of prostatic hypertrophy. The means devised for the treatment of retention of urine due to prostatic hypertrophy, are; first, those measures which tend to reduce prostatic inflammation and consequent cys-

titis, such as massaging the gland, electricity, deep instillations, irrigating the bladder with antiseptic and astringent solutions; second, the drainage method or catheterization. This may be continuous or at regular intervals, preventing the accumulation of residual urine; irrigate the bladder with various solutions and in this way relieve prostatic congestion.

Both of these methods are objectionable as they promise no cure, but only relieve the symptoms of cystitis. Catheterization, however, does prolong life and make it more tolerable for the patient. Perineal and suprapubic drainage may be classed with the drainage method of treatment but affords no more permanent relief.

Castration has been tried and in some cases proved to be profitable, but has been abandoned by its former most earnest advocates.

The Bottini operation in selected cases of obstruction may give the desired relief, yet this is an operation in the dark and in a septic field. It is advisable only in well selected cases.

There is danger in the operation as well as from septic absorption.

Furthermore, the results are not as good as we would like to have. Statistics show about 15 per cent. failures, 34 per cent. partial failures and about 7 per cent. death rate in the hands of our most skillful operators. The work done at present is probably much better than formerly, and I believe with Dr. Hugh Young's modification of the Bottini instrument, we will have a much greater per cent. of cures than ever before. Instead of one, he has three blades of different lengths, in order that the length of the incision may be made in accordance with the size of the prostate. Often the small, hard prostate gives a great deal of trouble, and a very small incision is sufficient for a cure.

The next operation I wish to speak of for the cure of this form of retention is prostatectomy, both supra-pubic and perineal. Of course the operation is a very extensive one, and in extreme cases careful choice should be made between a radical and a palliative operation. This is the most sensible operation, it seems to me, as it removes the entire seat of the trouble; assuring us that if the patient recovers from the operation he will have no further trouble from this disease.

The procreative powers are destroyed by this operation, and in some of these cases the sexual powers as well. This fact has great bearing upon the choice of operation in early life and should have due consideration by both patient and surgeon.

The greatest objection to the supra-pubic operation is that the prostate gland lies be-

low the wall of the bladder, and to remove the gland by this route it is necessary to destroy a part of the base of the bladder or entire prostatic urethra. In this operation there is great danger of injuring the ureters and especially so when the prostate has grown into the bladder. If the patient has thick abdominal walls or a contracted and thick bladder wall, it is almost impossible to bring the field of operation within view, and the operator is forced to tear out by means of biting forceps and the fingers, parts of the base of the bladder and gland without knowing how much damage he is doing to the internal sphincter or ureters. This is the operation of choice, however, when you have enlarged prostate with stone in the bladder, and especially if you have pedunculated prostatic growths into the bladder, which is often the case.

Perineal prostatectomy, it seems to me, is an operation founded upon sound principles. It is sound anatomically, because the posterior portion of the prostatic urethra is removed, thus allowing easy access to the new growth. The base of the bladder and internal sphincters are not injured; free drainage is secured, and the capsule of the gland is left, to which the principal supports of the bladder are attached. Septic cystitis is not at all likely to occur, and if present is soon relieved because of the establishment of free drainage. If great care is taken not to destroy the internal sphincter, the danger of evacuating the bladder suddenly, with its ill consequences, may be overcome to a certain extent.

It seems to me that this is the most scientific operative procedure for the cure of retention of urine due to prostatic hypertrophy, and one destined to accomplish much for the relief of the ills caused by this complication of retention. For a description of these different operations I refer you to your text-books.

Appendicitis, Its Diagnosis and Treatment.*

By Francis J. Kirby, M.D., Surgeon to St. Josephs Hospital, Baltimore, Md.

There is no one subject in medicine of which more has been written in the past ten years, or concerning which more liberal discussion has been indulged in, than disease of the Vermiform Appendix; and the successful surgical treatment of inflammations of the peritoneum consequent upon disease of the Vermiform Appendix, constitutes one of

the most brilliant achievements in modern surgery.

To begin with let us consider briefly the appendix from its earliest appearance in the embryo.

In the embryo the large intestine is not distinguishable from the small intestine by any difference in lumen and lies towards the median line of the body.

The commencement of the large intestine is by the appearance of the caecum growing out forming a lateral protrusion of equal calibre and remaining narrow at its blind extremity to form the veriform appendix, while the remainder of the caecum and colon increase in size.

In the fœtus the caecum is conical in shape and its apex gives attachment to the slender process called the veriform appendix.

The width of this progress is about 6 m.m. ($\frac{3}{8}$ inches), and its length about 92 m.m. ($3\frac{3}{4}$ inches), these dimensions vary a great deal, likewise the position of the appendix varies: as a rule it will generally be found passing from behind the caecum either upwards and to the left behind the ileum and mesentery in the direction of the spleen, or downwards and to the left so as to lie on the pelvic brim or below it; sometimes situated entirely behind the caecum, or in the sub coecal fossa, and may be quite free or bound down to the peritoneum. It has a peritoneal fold the meso-appendix, containing the blood vessels and nerves, which is attached to the appendix for about 1-2 to 3-4 of its length. The distal end of the appendix being generally quite free and surrounded by peritoneum. Its cavity is hollow and communicates with the caecum by a small orifice guarded by a valvular fold of mucous membrane, the valve of Gerlach. According to Ribbert's observation the cavity of the vermiform appendix exhibits a distinct tendency to undergo obliteration. Out of 400 cases 25 per cent. had the lumen of the process more or less obliterated; in 50 per cent. of the obliterated cases the distal fourth only, and in 4 per cent. the whole process was closed. This tendency to obliteration increased with age.

Ribbert also investigated the length of the appendix at different periods of life and found from an average length of 34 m.m. at birth it grew gradually and slowly to an average length of 98 m.m. by the twentieth year, after this it gradually diminished in length to about 83 m.m. at 60 years.

Ratio of the length of the appendix to the large intestine in the infant at birth is as 1 to 10, and in the adult as 1 to 20. From its anatomy we see the appendix is a hollow pouch with a blind extremity, con-

*Reac before the North Carolina Medical Society, June 10, 1902.

taining a mucus lining with mucus glands, nerve, blood and lymph supply; now as long as the secretion is produced and drained away normally the organ remains healthy and intact, but in case this is interfered with and there is retention with decomposition of the contents in the appendix, or anything causing impairment of its structure, or that bacteria of sufficient virulence and numbers penetrate the coat of the appendix and there set up various types of inflammation.

Appendicitis is a disease of young life, being most common between the ages of 15 and 30 years.

Etiology of Appendicitis.

1. Indigestion appears to act as a cause in that the food here provokes a catarrh and brings about anomalous constrictions of the intestines.

It is not infrequent to get a history of an attack coming on after a period of gormandizing, as after the ingestion of large amounts of not very easily digested foods, apples, peanuts and the like, a case I saw recently the attack, the third one came on suddenly after a large meal of ham and cabbage taken in the evening, and a patient now under my care, had her attack shortly after eating a quantity of peanuts, candy and bananas.

2. Traumatism, as by some violent exercise, foot-ball, bicycling, etc.

3. Infectious diseases, as rheumatism and la grippe. Ten cases of la grippe coming under my observation in an institution suffered at the time with what appeared to be an intestinal neuritis with slight distention and obstruction of the bowels due to the partial paralysis and loss of tone in the intestines as result of the neuritis, and three of these ten cases developed acute appendicitis two months later, the attack being the first and only one in each case, and upon each I operated for acute suppurative appendicitis. The frequent incompetency of the value of Gerlach, the close communication of the cavity of the appendix with that of the caecum, and the well known normal antiperistaltic movement in this part of the large intestine, which tends to pack the feces in a mass in the caecum would account for fecal concretions, and other foreign bodies in the appendix, and would also permit of gasses of decomposition and products of putrefaction together with bacteria being forced into the appendix.

Of course the essential cause of appendicitis is infectious bacteria, of which a great number have been found; chiefly colon bacillus and streptococcus.

In one case I obtained a pure culture of

the bacillus pyocyaneus as the causative factor in the production of an acute attack of appendicitis.

As to the varieties of appendicitis, they may be classed as follows:

Acute appendicitis, chronic appendicitis, and obliterating appendicitis. These may be further sub-divided.

The acute variety.

Acute catarrhal appendicitis.

Acute interstitial appendicitis.

Acute suppurative appendicitis, with or without perforation.

Acute gangrenous appendicitis.

Chronic appendicitis may be divided into:

Chronic catarrhal appendicitis.

Chronic interstitial appendicitis.

Obliterating appendicitis, this later form may be classed by its self as a third and distinct variety.

One must frankly admit that we are not always able to distinguish clinically the different pathological varieties of appendicitis. It is the diagnosis of appendicitis which is all important and this does not as a rule present any serious difficulties if we will bear in mind the four cardinal symptoms viz: pain, tenderness, rigidity and temperature. In referring to temperature here, I mean rectal temperature exclusively. Taking them in order mentioned let us consider 1st, the pain, Pain generally comes on suddenly and may be referred to anywhere in the abdominal cavity, usually to the umbilical or epigastric region, at times over the whole abdomen, the pain is lancinating-cramp-like colicky, and often the patient speaks of it as a regular bellyache, sometimes it is complained of as a general feeling of soreness of the abdomen. In those cases where the pain is disseminated over the whole abdomen to be localized in two or three days in the right side, as a mass will almost always be found on examination. The characteristic pain of appendicitis corresponds as noted by McBurney to the location of the attached portion of the appendix, that is on a line drawn from the anterior superior spinous process of the ileum to the umbilicus, about half way between these two points; this is McBurney's point so much referred to in connection with appendicitis; this area, however, is more significant as the point of tenderness, which will be spoken of later. Let me state here that the pain of appendicitis is by no means always referred to McBurney's point, and pain elsewhere about the abdomen does not exclude inflammation of the appendix. The different positions which the appendix may occupy in the abdominal cavity and the different portions of the appendix which may be effected, also the point of involvement of the sympathetic nerve fibres, would

readily explain this. For instance pain may be referred to the left side when the appendix points downwards towards the left and generally the appendix is below the pelvic brim; pain may be felt along the spermatic cord and there may be retraction of the testicle as in kidney stone, in two of my cases pain was referred entirely to the head of the penis and along the under surface; of the urethra; and at operation a perforated appendix was removed and an abscess cavity in the pelvis evacuated in both cases. Where the inflamed appendix occupies the pelvis there is apt to be bladder symptoms, inability to void urine, pain and tenesmus, or frequency of urination with passage of small amounts attended with pain in the bladder. I have had as much as 1,500 cc of urine catheterized from patients with retention and inability to pass urine, and at operation in each case an abscess deep in the pelvis behind the bladder was found. If the appendix is behind the cæcum, pain is referred to the back, to the kidney and along the course of the ureter, or to the liver and upwards to the right shoulder. A private patient, young lady 20 years, of age, operated upon by me in May of this year, the patient complained of no symptoms except severe continual pain in the coccyx, and to use her own words she "had to always be hunting around for some soft spot to sit down," this patient had a tender spot corresponding to McBurney's point, on her right side. At operation there was found dense adhesions between the large bowel, the cæcum, the pelvic organs, and the rectum; the appendix was found pointing downwards and somewhat to the inner side of the colon, the tip of the appendix was below the pelvic brim down in the true pelvis, the appendix was obliterated except for its distal extremity which was swollen bulbous and gangrenous, had burst forming an abscess which had burrowed into right ovary, this ovary partly forming the anterior wall of the abscess; about 45 cc ($1\frac{1}{2}$ ounces) of pus was evacuated, the entire necrotic mass removed; patient did recover and is well to-day.

Sudden sharp pain after a period of gradual subsidence, or acute pain after an interval of steady dull pain, always means extension of the local peritonitis, and frequently is significant of rupture of the appendix or of an appendical abscess. On the other hand I have seen two cases of ovarian cysts (one a solid dermoid) with twisted pedicles setting up inflammation, both had rise in temperature and severe pain which was referred directly to the region described as McBurney's point. At operation the true cause, the strangulated tumor due to twisting on its pedicle was found, and in each

case a careful examination showed the appendix to be perfectly normal and healthy.

Tenderness.

2. Tenderness to my mind is a very important symptom and of as great diagnostic evidence as pain, it is now that the spot referred to as McBurney's point is of value; tenderness over this area especially if associated with rigidity and temperature is always of significance, and in severe cases the tenderness is always great.

The great tenderness over the abdomen in females, where there is inflammatory disease of the appendages, or where during menstruation a possible congested and painful ovary will cause tenderness; but it was never referred directly to McBurney's point as the point of greatest tenderness in any case which I have seen.

I have ment with cases where the diagnosis was between appendicitis and an inflamed tube or ovary, and in none of those operated upon was there any appendicitis except where the tenderness had been referred directly to McBurney's point as the area of greatest sensitiveness. Tenderness may extend all over the abdomen especially in the early stages of a general peritonitis or it may extend to the region over the bladder when the abscess is in the pelvis, or it may radiate to the back and loin when the abscess is behind the colon.

Begin your palpation at some distance from the sensitive region and you gradually approach the tender area. A localized spot of extreme tenderness is the surest indication of pus formation.

Rigidity.

3. If there is no tenderness there is no rigidity, the muscular rigidity is a prominent symptom, it is a tonic contraction, muscle spasm and is the result of the peritoneal inflammation and as a rule is in proportion to the extent and severity of the associated peritonitis. The rigidity very early becomes right sided after the localization of the infection and is very hard to be mistaken—uncover the patients abdomen, stand at the foot of his bed and watch the abdomen during respiration or have the patient take deep inspirations and you will at once notice the absolutely motionless condition of the rigid abdominal wall, especially the right side.

General rigidity at times may be very difficult to make out. General rigidity is very marked in cases of diffuse suppurative peritonitis and this muscle spasm is often sufficient to mask any tumor mass, which after the patient is anesthetized is perfectly easy of detection; the muscle is kept in tonic contraction by the stimulus from the

underlying inflamed structures, it is regarded as an involuntary protection to the parts beneath.

Sense of touch, palpation, will assist very much in defining the amount and intensity of the rigidity.

Rigidity with distinctly localized pain in the right side speaks strongly for appendicitis, and with rise in temperature and extreme tenderness over McBurney's point absolutely seals the diagnosis of appendicitis; and if with these symptoms you have a tumor you know positively it is appendicitis with abscess. This rigidity is most marked in the early period of the disease or during acute exacerbations (repeated attacks) and as the diseased appendix or abscess as the case may be, becomes firmly walled off the rigidity diminishes very much, in fact I have been able then to palpate walled off abscesses with a perfectly lax and soft abdomen which I was unable to do 24 hours before on account of the extreme rigidity; and the abdomen always softens as the acute symptoms pass off when a tumor can frequently with greatest ease be mapped out.

Rigidity then is an important symptom when taken with pain and temperature—and this rigidity I have never seen so marked in any other disease in the abdominal cavity. Frequently it is very evident to find a rigid abdomen with marked increase of the muscle spasm on the right side which can be easily made out by palpation.

Rigidity then with temperature and tenderness is significant in that it speaks for infection in the underlying structures in the peritoneal cavity.

Temperature.

4. In all cases of appendicitis not chronic and indeed in many of the latter the temperature if accurately taken in the rectum will always be found to be above the normal; no case of acute appendicitis has as yet come under my observation in which there was no rise in temperature.

The temperature varies anywhere from 99.5 to 104 or 105 and where the infectious agent is most virulent, in those cases is the temperature highest. In cases in which the streptococcus predominated I have always seen a higher temperature than where any other organism was the causative factor.

Unless the diagnosis of appendicitis is sure temperature may mean nothing, or perhaps constipation, temperature and pain are often deceptive and must be taken along with the other symptoms to be of value. Again I emphasize the necessity of rectal temperature, the thermometer may

register a normal temperature in the mouth while if inserted in the rectum the temperature will be found to be 104 or higher, and the patient with a virulent and general infection. I now recall a case of a young woman who was brought to St. Joseph's Hospital with a mouth temperature of 98.6 deg Fah., while the rectal temperature was 104.5 deg Fah. This patient was operated upon at once and two litres of purulent fluid was evacuated from the peritoneal cavity, the result of a ruptured gangrenous appendix. When sent into hospital this woman was not supposed to be suffering from a severe attack, and on account of the low temperature in the mouth was not thought to be very sick.

Vomiting, distention and loose bowels with general tenderness and cramp like pains over the abdomen are symptoms likewise of great importance, and the rapidly progressive forms of acute appendicitis very frequently begin this way, and such an attack should lead the physician always to be on the lookout for trouble in the appendix.

I have seen cases which began this way and when operated upon within twelve hours after the beginning of such an attack an acutely swollen inflamed appendix found with turbid exudate in the abdominal cavity.

A great many, in my experience the majority of cases of appendicitis give a history of constipation.

Vomiting, constipation, abdominal distension coming on during an attack of appendicitis, if associated with general pain and tenderness is always grave; 'tis significant of a generalizing of the infection over the peritoneum with a certain amount of obstruction of the bowels due to coils of intestines becoming sealed together by the serous exudate, inflammatory adhesions with the accumulation of gasses in the bowels causing distention.

Vomiting of itself is insignificant and is very common in any disturbance of the alimentary tract, and may mean merely some indigestion; but vomiting coming on during an attack of appendicitis especially if the vomiting is attended with no effort but is merely an easy regurgitation, and if dark in color, is a very serious symptom and suggests with the other symptoms peritonitis, and most frequently a fatal termination. Vomiting depends somewhat on individual idiosyncrasy or may be the result of an anæsthetic; occasionally this dark vomit is seen after anæsthesia.

Having considered the diagnosis from symptoms relating to appendicitis, it now becomes important to mention a few dis-

eases with which from the abdominal symptoms appendicitis may be confounded.

First from Typhlitis.

Typhlitis closely resembles appendicitis; its symptoms are said to be pain in the right side with a condition of stasis of intestinal movements and presence of a doughy like tumor in the right side—personally I cannot say that I am able to diagnose this condition. Most text-books on surgery refer to it as a part of an appendicitis, and every case in which I have seen these symptoms the condition on the operating board or in the pathological room, always showed inflammation and changes about the cæcum, adhesions—thickening of bowel wall etc., and were the result of a diseased appendix which was invariably found.

From typhoid fever the history of the case, sudden onset of appendicitis, extreme tenderness and rigidity on right side, history of previous attacks.

Typhoid preceded by period of malaise, gradual oncoming anorexia, marked head-pains, steady increasing temperature, enlarged spleen, rose spots—agglutination test—and the absence of leucocytosis in typhoid fever.

Tuberculosis of the cæcum. This is a chronic affection and lacks the cardinal symptoms of appendicitis, the tuberculin test would here be of value to clear a doubt. As for cancer the same may be said, it lacks the characteristic symptoms of appendicitis. Intestinal obstruction, at times, it may be very difficult to differentiate between appendicitis and some forms of intestinal obstruction especially if due to bands of adhesions, pressure of a tumor, or constipation, but here the temperature is generally normal and constipation absolute; coils of intestines can be seen through the abdominal walls making violent peristaltic movements, and a finger in the rectum will find the lower bowel empty, vomiting is continual, may be fecal—absence of temperature, tenderness in right side and rigidity. Acute indigestion with severe pains and vomiting;—here you have absence of temperature and tenderness, pressure over abdomen apt to relieve pain—history of having eaten some indigestible food.

Ptomaine poison. Little to add here to what has been said concerning acute indigestion except vomiting more persistent and weakness profound.

Renal colic.—Pain is here along course of ureter, no fever or other symptoms of appendicitis—retraction testicle in male, frequency of urination, pain along ureter and over pubes in both sexes.

Bile stones.—Pain is high up on right

side at time in shoulder of same side—jaundice coming on in a few days.

Diseased appendages in the female. Here a thorough examination under anaesthetic will frequently decide the case.

I have known uterine fibroids to cause irritation and set up inflammation in the peritoneum, patients would have rise in temperature, rigidity, general abdominal pain, but tenderness was more in the middle line—examination revealed the tumor which was proven by operation in each case.

Treatment.

The ideal and only sure treatment for appendicitis can be summed up in a very few words—removal of the appendix in a clean way. Appendicitis is a purely and simply a local infection confined to the vermiform appendix, remove the appendix, the patient gets well and has no return of the disease. Appendicitis is not a general or systemic disease, and only becomes a constitutional malady whenever the toxic products of bacterial life gain entrance to the circulation; when the condition is one of toxæmia or septicaemia, according as the toxins or organisms themselves enter the general circulation and the condition is more or less grave according to the virulence and class of organisms producing the disease.

A condition of septic infection beginning in a local manner, as for instance about the surface of the body would be very quickly met, with an attempt on the physician's part to prevent any spread of the disease and to cut short the already existing condition, preventing lymphatic involvement, a possible general septicaemia and death. To accomplish this the knife would be resorted to, and free and liberal incisions made.

In appendicitis we have the same condition of affairs, only that the appendix is in the abdominal cavity, and its removal does not affect the future well-being of its possessor, from a physiological standpoint so far as we know; hence all the more reason for prompt and ready action. Yet notwithstanding this knowledge patients are repeatedly kept waiting with expectant treatment in the hope of subsidence of the disease, until the abscess bursts, or the disease extends over the peritoneal cavity, ending in a rapidly fatal peritonitis. This condition is frequently met with in patients brought into large hospitals.

Appendicitis, the "Abdominal phlegmon" of the English writers, is a condition calling for most careful attention on the part of the attending physician. In all suspected cases of appendix inflammation the physician should keep closely in touch with the surgeon who could share responsibilities, in order that the patient may have

the benefit of operative treatment just as soon as the symptoms seem to indicate it.

Knowing the safest place for a diseased appendix is outside of the abdominal cavity, still we are at times confronted with conditions which preclude positive assurance of recovery of the patient following operation and removal of the appendix.

Leaving aside prejudice against operations, let us consider the condition of the patient when called to see him.

In the early stages absolute rest in bed should be insisted upon. If vomiting and nausea is conspicuous small amounts of hot water given at short intervals, say every 10 or 15 minutes, will frequently relieve it, or better still, small doses of calomel. Food of every kind should be withheld for a few days; but if the stomach is quiet patient may be permitted to drink water, or saline solution as much as a pint may be introduced into rectum to allay thirst and nausea. All local applications to the abdomen (with the exception of cold cloths or ice-bag) as blisters, poultices, counter-irritants, iodine and medicated pastes should be absolutely avoided; they can do no good and at best have only a psychical effect. And, again, in case an operation is called for their presence only complicates the condition by presenting a raw, inflamed or irritated surface in the field of operation, which cannot be properly cleaned, and affords a ready mode of entrance for infectious material and bacteria.

Having made the diagnosis, if the patient is in much pain, a small dose of morphia combined with a minimum of atropine may be administered to relieve pain; never give opium until after the diagnosis is assured, and even then its use is undesirable, as it so frequently masks the symptoms and leads one to underestimate the gravity of the attack.

If morphia must be given let it be only in the smallest doses, which will relieve the patient sufficiently to permit him to endure his sufferings. As for purgatives, many of these patients are of constipated habit and great relief is frequently given by a rectal enema effectually unloading the bowels. I can see no reason for locking up the bowels with opium as recommended by some writers; but if the stomach will retain it small doses, as a dram of Epsom salt, saturated solution in hot water every hour till the bowels move, will be attended with free liquid movements and most marked comfort to the patient with amelioration of the symptoms. An attack may after this pass off never to return, feeding can be begun gradually and the bowel functions normally re-established. The case, however, may go on continuing to grow worse

when the question of operation then presents itself. No operation should be performed if the patient is dangerously septic as shown by the pulse temperature, etc., or if the patient is in collapse, as it will only hasten the end. If after a few hours the symptoms seem to be abating, it is better to defer operation until the parts surrounding are more completely walled off, when operation can be done and abscess evacuated under conditions much more favorable to the patient. On the other hand, if there is any increase in the symptoms, as rise in temperature or sudden severe pain, operation should be undertaken at once. I am heartily in favor of operating on every case of appendicitis whenever the acute symptoms are increasing or if they continue severe. I had one case with a rectal temperature of 106 deg., and a pulse that could not be counted, nor felt at the wrists when I saw him. This patient I fully expected to die on the operating board, but under saline infusions, hypodermic stimulation, and rapid operation this patient made a good recovery and is strong and well to-day. While many cases of appendicitis do recover after medical treatment there is no one who can give assurance that the disease will not return; indeed, return is the rule, and may prove the fatal attack.

Having met with so many cases of recurrent appendicitis, having seen a number of cases of general peritonitis, profound sepsis, necrotic bowels, large abscesses, dangerous and extensive adhesions of the bowels with obstruction, and prolonged suffering as the result of recurrent appendicitis or from rupture of an ulcerated or gangrenous appendix, a certain percentage of the cases with the mark of death already stamped upon them and found to be beyond restoration to health, I am more firmly convinced than ever that the removal of the appendix when diseased, is the only safe, just and sure procedure, and removal of the appendix in the interval between attacks offers every favorable and satisfactory prognosis for the patient.

I do not know of any more unfortunate happening, after an operation for appendicitis with peritoneal involvement, where the surgeon is obliged to insert gauze drains in the abscess cavities or between diseased intestinal coils, and the patient seems to be doing perfectly well for awhile, than intestinal obstruction coming on as the result of adhesions from such drains and a second operation is demanded for the relief of this otherwise fatal condition on a patient already weakened and exhausted by his attack of appendicitis and consequent septicaemia or toxæmia. I have had two

deaths, the result of intestinal obstruction coming on in cases of appendicitis where large abscesses had to be dealt with at the time of operation and I have been obliged six times to resort to secondary operations for relief here of complete obstruction. It has been my misfortune to know of the same fate occurring in the practice of other surgeons; hence Edebohls speaks so strongly against being compelled to use gauze drainage, and Deaver continually pleads for early operation and removal of the appendix in all cases of this disease. It was the knowledge of this, strengthened by experience, that led me to attempt a new method of attacking certain forms of appendicitis complicated with abscess, but unfortunately it is an operation which is limited to only certain locations of the abscess, and with your kind permission I will ask your attention for only a few moments longer while I read an account and report of the case. This report was read before the Medical Chirurgical Faculty of Maryland at the annual meeting at Baltimore April 24th, 1902.

The so-called appendiceal abscess may result either from a ruptured appendix due to separation of a gangrenous slough, or it may occur from escape of the elements of suppuration from a diseased and inflamed appendix. There may be an abscess formed with the first attack of appendicitis from rupture, or extension of infective material, or it may occur after one or more attacks.

These abscesses have been found almost everywhere in the abdominal cavity.

Free in the abdominal cavity causing a general peritonitis, walled between folds of mesentery, behind or in front, to the inner or outer side of the colon, over the bladder, or extending across the abdomen to left side and pointing in left groin as in one of my cases; or forming a localized collection of pus walled in by the visceral and parietal peritoneum forming later an abscess just beneath the skin, or in the layers of the omentum, forming a more or less movable mass, or down in the pelvis simulating pelvic abscess. Further, they may be associated by adhesions with some of the important viscera of the peritoneal cavity into which the abscess may rupture.

The cases I here refer to are those where the abscesses are in the pelvis, situated at or below the pelvic brim, their lowest point.

These cases are frequently large abscesses, some of them if left alone may rupture into the bowel.

If opened from above through the abdominal wall it is not easy to obtain successful drainage; trephining the ileum or using the sciatic foramen as channels for drainage does not seem without objections;

again everyone who operates upon such cases and is obliged to insert large gauze drains, knows the danger of intestinal obstruction and the demand for a second operation for relief of obstruction of the bowels in a patient frequently only a few days after the first operation and when the patient is in the least promising condition for such an ordeal. This has caused death in two of my cases, and in cases of other surgeons. Most operators deplore the necessity of using gauze drains in the abdominal cavity, but at times we are compelled to use them; more important, however, is the condition of the patients, they are often so weakened and depressed as the result of septic intoxication and exhausted from a more or less prolonged illness that the prospect for successful operation is not very bright. They do not always bear general anaesthetics well, and the shock due to working about in the abdominal cavity and among intestines is very great. Frequently these patients appear as though they would die on the table.

The case in point was a male, age 34, single, brought to St. Joseph's Hospital, 10:30 p. m., Feb. 15th, 1902. History; family and personal negative except that he has had 3 or 4 attacks of cramps during his lifetime. States that on January 25th, 1902, about 10 p. m., was seized with sharp excruciating pain in centre of abdomen just below the umbilicus. Bowels had not moved for 4 days previous to that time, was nauseated in the beginning, vomited, and had eructations of gas. Took various medicines and applied turpentine to abdomen to relieve pain which lasted severely about 1 day. Attempts were made to move the bowels during the past week without result and vomiting became so much worse in the last few days that the patient was brought to St. Joseph's Hospital. He entered on the medical side of the Hospital in the service of Dr. C. O'Donovan, whence this history was taken and note made by Dr. H. J. Keaney.

Facial expression indicative of suffering, countenance pale, eyes sunken, malar bones prominent, cheeks sunken, has a pinched look, tongue dry, dirty greyish-white coat on dorsum, breath foul, sordes on gums. General appearance that of sepsis.

Physical examination pass over. Abdomen distended, ballooned, loss of epithelium with red inflamed area over abdomen due to applications of turpentine.

Palpation: Marked rigidity, especially tender to touch over right side. Temperature mouth 100.6 deg., Fah. Rectum 103 deg., Fah.; pulse 110, respiration 24. Urine sp. gr., 1.040, acid, albumen, sugar, hyaline and granular casts, diazo reaction

negative. Is nauseated vomits at times a dark greenish yellow fluid. Leucocytes 17,400 p.c m. Widal reaction for typhoid fever negative.

Rectal enemata given with good result, nausea and vomiting ceased.

A mass can now be felt on right side of abdomen, abdomen less distended, less tender. Diagnosis, appendicitis with abscess.

Transferred to surgical side Feb. 16th, when this note was made: Patient very ill, skin wet, doughy feel, muddy white in color, cheeks red, flushed, sunken, eyes glassy, breath has a disagreeably sweet odor.

Body emaciated M. M. pale, anaemic looking.

Lungs, heart, etc., uninteresting, abdomen liver edge not made out, spleen not palpable. Abdomen distended, tympanitic, drum-like, rigidity of both recti muscles more marked on right side where is seen bulging of the belly-wall, abdomen held rigid on deep inspiration, especially right

palpation with the other hand over right side of the abdomen and a finger in rectum a sense of fluctuation is made out. This examination causes much pain. Bladder, prostate, seminal vesicles, etc., free. Pulse volume small, weak tension, 120 beat to the minute; temperature, rectal 102, mouth 101.2 deg.; respiration 26. Blood leucocytes 27,000, haemg. 36 %; red cells 3,800,000. Urine, few granular casts, hyaline casts, cylindroids, albumen a trace, few epithelial cells, no sugar, sp. gr. 1.034, reaction acid.

Patient's general condition was one of extreme weakness, had lost much flesh and strength, haemg. low, patient anaemic, and his condition of illness demanded relief. After asking that the operating-room be prepared for early operation, while waiting I began to consider as to what would be the best operation for this man's condition, offering least shock, rapid procedure and secure good drainage, cure his disease and avoid the almost sure occurrence of ventral



side which is motionless. Palpation, distinct mass felt in right side extending from external border, of the right rectus muscle down to and along Poupart's ligament, upward to a line drawn horizontally across the abdomen through the umbilicus at top, then outward and backward around loin to edge of quadratus muscle.

Percussion elicits dullness over this entire area where the mass is felt. Handling, manipulation causes pain. Tension of this mass is cyst like. Rectal examination, on pushing finger well up into rectum the tip of the finger comes into contact with what appears to be a large, soft mass, and by

hernia if attacked through the abdominal wall. As I had about one year previous successfully operated through the vagina of a female for appendicitis, it suddenly occurred to me if I could use the ischio rectal space here as a route of entrance to this mass, I should obtain good drainage, would not run same risk of infecting general peritoneal cavity, do away with some of the gauze drainage, and if successful insure the patient against ventral hernia, anyway it would enable him to build up and recover from his septic condition when I could do a clean appendectomy later in the usual way. With the valuable aid of my assist-

ant, Dr. F. K. Boland, this was easily accomplished. The patient practically in a moribund condition was brought into the operating room, 700 c.c. of normal salt solution infused.

Operation: A curved incision about 17 cm. (7 inches) long was made in the right buttock midway between the tuberosity of the ischium and the anal orifice directly in the ischio rectal region. The fibres of the levator muscle separated, blunt retractors introduced to push the rectum forward and to the left, when the abscess was found easy of access. This was opened and about 500 c.c. of a thick, foul-smelling pus evacuated, when the gangrenous appendix could then be ligated off. The cavity now was washed out with hot sterile normal salt solution, a rubber tube with a piece of gauze inserted into the cavity. Patient returned to bed with rectal temperature 99.6, pulse 110. Bowels moved two days after operation by enema, and later without further trouble. Patient made an uninterrupted recovery, mass quickly disappeared from abdomen, and when last seen, April 10th, 1902, two months after operation, nothing could be made out by rectal, or by combined rectal and abdominal palpation.

Malarial Infection.

E. G. Goodman, M. D., El Paso, N. C.

In recent years there have been but few subjects in medical nomenclature so prominently before the profession as the subject of malaria.

The interest centering in this subject has been due to the discovery of the extracorporeal existence of the haemamoebae in certain kinds of mosquitoes, and the manner of interchange of the parasite between the intermediate and the determinate hosts.

It would be out of place to enter into a dissertation to prove the transmission of malaria by mosquitoes. That has passed from the realm of speculation to that of established fact, and medical science claims a triumph in having demonstrated, experimentally and microscopically, that which a few years ago was supported only on theory.

The haemamoebae of man and the proteosoma of birds have been followed in their cycle of development from the blood corpuscles of the vertebrate animals to the alimentary canal of mosquitoes, through the walls of which they make their way, and develop spores in the general circulation. These spores, collecting in the veno-mesenteric gland, with its excretory duct emerging

at the mosquito's proboscis, are returned to the intermediary host by the bite of the insect.

Accepting unreservedly that which is capable of demonstration, we are not to reject that which is based on plausible theory, though it may as yet lack scientific verification. In this connection it may be pertinent to consider whether there may be methods of inoculation of malaria other than by mosquitoes.

There are many who hold to the exclusive transmission of malaria by mosquitoes; and some of these have achieved such distinction in this field of investigation, that it may seem like rashness to attempt to controvert the theory supported by the prestige of these great names.

It is, however, a logical fallacy to accept a part for the whole, and to consider that the discovery of one avenue of infection affords a complete solution of the problem, and precludes the possibility of others.

The theory of infection by inspired air is so old that it is considered rather antiquated by the enthusiasts for the new discovery. If the theory of malarial infection by means of inspired air is to be considered a relic of foggyism, it will require more evidence than has yet been given to prove that it is innocuous in this respect.

The efforts to determine this experimentally have been so few, and so crudely conducted, that there is no parallel between the conditions existing between the experiments, and the conditions existing in everyday life. When small quantities of air have been taken from malarious districts, and the attempt made to infect subjects with it, the failure of success in these cases can not negative the theory they were designed to prove.

We find malaria prevalent under two opposite conditions—extremely wet and extremely dry weather. The first named condition is favorable to the propagation of mosquitoes, while the second condition offers directly opposite results. If infection occurred exclusively through the medium of these insects then the reduction of malaria should keep equal pace with the reduction of mosquitoes.

Such, however, is not the case according to published statistics. It is reported that Mr. Gorgas, Chief Sanitary officer of Havana, has reduced malaria by fifty per cent., and has reduced mosquitoes by ninety per cent. Here we find a difference of forty per cent. in the ratio of reduction, which would indicate that there is probably some other avenue open to infection.

It is to be borne in mind that the same condition that prevail in Cuba, in regard to malaria and yellow fever, under Spanish

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rule, also prevailed in Jamaica under Spanish rule; and the improvement in the conditions of health in Cuba in the last three years finds its prototype in Jamaica generations ago under English rule. long before there was any organized crusade for the extermination of mosquitoes.

The most ardent advocates of the doctrine of infection by mosquitoes exclusively decide the possibility that the air may act as a carrier of infection, and consider all such theories as fancy born of the inability to appreciate the advances of science.

It is a notable fact that, in places where malaria is rife, the indiscriminate upturning of the soil in cities during the months of hot weather has been followed by increase in the number of cases of malaria with such regularity that, if it is not an example of cause and effect, it has been a coincidence of such regular occurrence as to attract the attention of competent observers for generations past.

After Laveran discovered the malarial parasite in the blood in 1880, fifteen years elapsed before Ross determined its presence in the mosquitoes, and traced its cycle of development, and method of return to the human subject. During these long years of careful research, all efforts failed to identify the parasite outside of the vertebrate host.

The failure of microscopists to identify the haemamoebae or their spores in the soil, air or water, so far from disproving their presence in these media, is a stimulus for other investigators to continue the research, and win laurels similar to those already won by Ross, Manson and others.

It does not require a great stretch of the imagination to infer that resistant spores may be scattered broadcast in the soil and in water, and by the agency of winds, and by the noxious effluvia from water and from foul soil, may be constantly in the atmosphere, ready to produce infection through the medium of inspired air.

Mosquitoes draw nourishment from plants, fruits, and water; and if they discharge infected saliva in the act of drawing blood from the human subject, it follows by analogy that they also discharge infected saliva in drawing nourishment from the other sources above mentioned. If we admit the existence of malarial spores outside of the organisms of the animal kingdom, then infection by aerial transmission becomes more than a probability.

It is an uncontroverted fact that tubercle bacilli gain entrance to the human organism by means of inspired air; if true in regard to tuberculosis, why should it not also be credible in regard to malaria.

No less authority than Ronald Ross in-

forms us that the malaria-bearing mosquitoes are propagated mainly in shallow, stagnant pools, not subject to being flushed out with running water; while the *Culex* or harmless variety, are propagated mainly in vessels filled with rain-water, and other similar sources. The same authority also tells that mosquitoes have very short migrations and seldom wander far from their places of incubation.

If these observations are correct, we will not find many places suitable for the propagation of the anopheles, or malaria-bearing mosquitoes in cities that keep pace with modern sanitary regulations. It would be a difficult matter to find shallow, stagnant pools in any city of North Carolina; yet, perhaps, there is no city of the Eastern part of North Carolina, but what furnishes its quota of malarial fever during the hot and sultry months of summer and early fall.

The evidence thus far obtained shows that mosquitoes do not, directly or indirectly, infect their ova or young, and that mosquitoes are germ-free till they have become infected by feeding on the blood of malarial patients.

If we assume that nearly all mosquitoes die during winter, and that all young ones are at first innocuous, we will have difficulty in explaining the rapid and simultaneous occurrence of malaria over large areas of territory, with the advent of warm weather, unless we admit the hypothesis of some other source of infection.

Annual Oration.*

By John C. Rodman, Washington, N. C.

It may perhaps seem to this intellectual and cultivated audience, composed of those whose daily life is sufficient evidence and guarantee of their belief; and of those who are in sympathy with our noble profession, that "medicine a science," needs no argument from my hands, to establish the truthfulness of such fact, but that it stands alone a self evident proposition in burning letters of relief from human suffering.

The thought that such could be doubted appaled me, and yet, in conversation some few months since, with a gentleman who at one time was a regular practitioner of medicine, but who is now classed by our fraternity as an "irregular," and who professes to believe and practice in a school of osteopathy. He made use of the expression "if medicine be a science at all," meditating over the remark, I began to think

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of the many other schools of ists and isms, with their cures by faith, and faith from cures (?), with their many thousands of followers, and my conclusions were that there are many yet to have suffering and regret, through the natural propensity of man, to believe in great promises and showy testimonials. So if my discourse appear dull and uninteresting, I beg of you to forbear, for it is from the medical profession that light must come from those who seeing, yet, know not.

The medical profession must teach them that while there are many things still unknown and unaccounted for, yet, there are established rules from which there can be no departure.

Medicine a Science.

I know the earnest, conscientious, hard-working practitioner never doubts it, for his life would be a living lie.

The student of medicine fresh from home or college, plough or pasture's green, when for the first time in the dissecting room, he feels a tremor of the nerves at the idea of carving and studying that piece human clay he at that time never doubts it.

The gray-headed sage, who has reached his allotted time of three score and ten, after a laborious practice of half a century, reflecting over its trials and tribulations, his hours of pleasure and his days of labor, with a retrospective glance into the years that have dassed, furring his brow with other's cares, making white the head that has often bowed down with the misfortunes of those entrusted to his care; when his memory touches here and there upon scenes of bygone years, and lingers at a bedside where there come blessed relief from acute pain, and restoration to health and happiness, all through the proper appreciation and application of scientific medical principles. Can anyone believe that he, with his ripened experience of fifty years, could for a moment doubt or loose faith.

"Men grown great through labor's
grand,
Are jewels polished by the Master's
hand."

It is the experience of every thoughtful, medical man, that there are certain scientific medical truths which are (conditions being the same), positively and absolutely incontrovertible; and that these truths or facts are thoroughly understood both collectively and individually, when dependent one upon another or alone, each having been analyzed by the best of minds, tested by years of time and proven with mathematical exactness. These axioms appear

so simple in this age of medical and scientific enlightenment, that we are apt to take them as a matter of course, and do not realize that at one time they were entirely unknown, and unappreciated; that it took years of time and an immense amount of labor to elucidate them from the mass of empiricism which surrounded their inception, and that upon them, and because of their absolute truthfulness, the whole foundation of scientific medicine rests.

In the scientific application of medical principles, we must remember, always, that man is a machine, fearfully and wonderfully made, planned, fashioned and completed by an All Wise and Omnipotent Being, and incomparable to the most delicate, intricate, complicated piece of mechanism ever devised by the hand of man, though guided, governed and controlled by the yet unsolved laws of Nature.

Death and decay are as natural and are as certain as birth and life. The budding green leaves of the stately oak, the delicate tints of the queenly lilly (comparable only to the cheek of a blushing maiden), all depend for sustenance, life and beauty, upon that, which in man would cause destruction and decay. Thus is nature's cycle completed.

We have advanced much since the days of primitive medicine, and it is because we have thrown mystery and empiricism to the winds and studied, first, man the machine; second, the internal and external, general and special influences upon it, and we have learned that when all parts of this wonderful machine are working together properly and in perfect harmony, that we have the ideal, moral, social and physical being, man.

We learn that there are many enemies as well as friends of this wonderful human organism of ours and that they produce deterioration, cause a departure from that which is normal, instead of health and buoyant life, there was misery and disease, that like the specters of old, their direful effects were felt, but they were not to be seen. The last medical era has brought to light the bacteriological origin of disease and while it has revolutionized the pet theories of brilliant men, yet, it has opened to the earnest seeker of medical truths a "vast field of unlimited vistas and boundless possibilities."

In every departure from the normal, and that constitutes disease, there must be a cause for such departure, and when the immediate and remote cause of any disease is known, then we are a long way toward the cure, or what is better, the prevention of such disease.

The great improvement in the microscope

in recent years has been a valuable addition to our armamentarium, in the study of the causation of disease, and it is from the scientific use of this instrument, that we expect to formulate such rules as shall give us the best results toward that which should be our constant aim, the prevention of disease.

The medical profession of this, the twentieth century, need men who are earnest seekers after scientific medical truths and who will accept facts wherever found and from whatever source. There never has been such an unlimited field for scientific research, nor the possibility, nay, probability, of such brilliant attainments as is presented to the hard-working, earnest, persistent student of the yet unknown laws of life. As in the history of invention, the simplest things of practical importance, have proven to be of the greatest benefit to mankind and of the greatest financial success to the inventor, so it is in the history of medical discoveries, that it is the practical observer, the thinkers, the earnest seekers after truth, that have conferred the greatest good upon humanity.

The observant Jenner, the man who lived with his eyes open, who asked himself the whys and wherefores of things, who studied, who thought, who reasoned. The immortal Jenner, the discoverer of vaccination, conferring the greatest boon upon mankind, when he deduced from his observation the simple fact that milk-maids did not contract smallpox. Yet, that observation has saved the lives of thousands upon thousands and has gained for that observer the thanks of millions yet to be. Is it always the student who from birth has had the greatest educational advantages, and who sits in his laboratory or study, surrounded by the costliest of scientific apparatus and with everything at his command to stimulate him to research—is it always he that makes the most important medical discovery or adds more to our store of knowledge? No, far from it. as medicine is founded on scientific principle, it must be either he that stumbles on a medical truth unknowingly and leaves it to be given to the world by some other observer, or, it is the thinker, the reasoner, who, by analysis, is able to sift the grains of gold from the mass of ignorance and superstition, in which it is usually imbedded.

As representatives of the greatest profession on earth, whose foundations rests on the purest of scientific principle, can we afford to pass through our medical lives without, at least, making an honest attempt to add our jot or tittle in the shape of some hitherto unknown, simple though it may be, medical truth or fact?

If there is any truth in osteopathy, use it for what it is worth; if there be a particle of truth in Christian science, cull it out, and from its scientific use establish a principle if possible. Let us study medicine upon "principles as broad and as expansive as the blue arch of Heaven itself." Let us practice our profession from a plain which is high enough to recognize truth wherever found, whether gained from arduous labor in a twentieth century laboratory, with every aid and appliance that human ingenuity can devise; or, under the flickering rays of a pine torch in some lowly cabin buried in the depths of the woods at the holy hour of midnight.

If it be scientific medical truth, grasp it at once and be not afraid to hold it up to the gaze of a critical world. Rest assured that if there really be medical truth in your observation, that even though the penumbra of medical opinion may swing to yne or the other extreme, that in time it will rest at the exact spot representing its value to humanity.

In the conclusion of this (well known to myself), incomplete theme, allow me to say, that if my labor shall in any degree bring before the minds of my hearers how prone all of us are to believe unintentionally and without thinking in the old Latin maxim, "Post hoc, ergo Propter hoc," after this therefore on account of this how especial conducive to our physical well being and temporary professional pride to believe in the aforesaid maxim when our patients all get well; but upon the other hand by its too ready acceptance how very likely we are to get into the so-called "ruts" of practice, which like the habitual use of a narcotic drug, is easy to acquire but hard to discontinue. If I shall not only present to you the faults acquired by an indulgence in mental inactivity subsequent to seeming professional success, but shall also show to you that justice to ourselves, to our patrons and to the future of the science, demand that we, not only know why our patients get well, but if they succumb, why they succumb, then I shall feel that my labor has not been in vain. Whilst we work let us realize that the foundation of medicine rests upon the purest of scientific principles and by the continued study of cause and effect its scope is greatly enlarged. Let us also realize that the *practice* of medicine is an art susceptible of the highest degree of cultivation to attain professional and financial success.

To those unfortunates whose necessity demands our study, our care, and our professional attention; and to those who are so fortunate as to have our thoughts, our best endeavor, and the scientific application

of our medical knowledge, let me say, that if they would have the best results, let them recognize and acknowledge, that the doctor is monarch of the sick room and from his decision there can be no appeal.

Have confidence in your nurse, faith in your doctor, and trust in the God that has power over us all.

To those of you present who are neither men, doctors nor patients, I would have this to say: That you too, have your mission in life to fulfil, in regard to the advancement of scientific medical knowledge.

Even now as it has been, since the beginning of the world, woman has exercised her influence in life. Can we now ask less, than that by her kindly sympathy, her friendly encouragement, her natural ambition, that she continue to stimulate and imbue the natures of medical men, with an honest desire to still further grant to humanity such relief from pain and misfortune that an All Wise and Omnipotent Being may see fit to allow.

Creosote.*

By J. B. Wright, M. D., Granite Fall, N. C.

I shall make no attempt to follow the custom usually pursued by my predecessors. The chairman of each section usually explore new fields, and it has been especially so in the section of materia medica and therapeutics. I shall write on the drug that I feel that I can give the most information to the busy practitioner. I think creosote is that drug, and it is a drug that is being badly neglected by the profession, and, not without a just cause, and to remedy this cause shall be one of my feeble efforts in this paper. Perhaps almost every practitioner has experimented with creosote more or less, and yet very few average practitioners use it. The cause of non-success with creosote depends upon one of two things: either injudicious administration or the administration of an inferior article, the latter to my mind is the paramount cause of non-success of every doctor who uses it. Creosote like every other drug is manufactured by almost every manufacturing chemist, and as we ordinarily find it, it is not what we should administer to our patients. I shall as briefly as possible analyze creosote chemically. The ordinary preparations found among druggists are composed of first, Phenols which belong to the carbolic acid type with a chemical formula of C_6, H_5, OH .

Second, cresols with a chemical formula of C_7, H_8, O . Third, Phlorols C_8, H_{10} , Fourth, Guaiacol C_7, H_8, O_2 , and fifth Cresol C_8, H_{10}, O_2 .

At first glance one will note that the second and fourth or Cresol and Guaiacol have a very similar formula, yet the first is objectionable because toxic and the latter is non-toxic and of great therapeutic value, and again the third and fifth or Phlorol and Cresol are alike in their chemical construction, yet Phlorol is toxic and Cresol is non-toxic. Out of the five constituents of commercial creosote, we only want two, the other three being very objectional.

Repeating.—First the Phenols are a group of organic compounds of which carbolic acid is the type and are very poisonous. Second, Cresol is of the phenol type and consists of three varieties: viz., Para-cresol, Meta-cresol, and ortho-cresol which are isomeric, that is, composed of the same elements in the same proportion, but are chemically and physiologically different. Third, Phlorols are oily compounds and are very irritating and without any therapeutic value. Fourth, Guaiacols are oily liquids of decided, therapeutic value and are very often substituted in the place of creosote. Fifth, Creosols are colorless, oily liquids of an agreeable odor and burning taste, and of very great therapeutic value. Pure beech-wood creosote should be composed of Guaiacol 60% and Creosol 40%. These other impurities should be eliminated. Now the question arises how are we to know that we have a pure article, and who can we rely upon, I shall try to explain. Rely upon no one as to the purity of creosote, but test every sample yourself before prescribing it. I shall give two or three very simple tests that any doctor can apply and that every doctor should apply before giving a sample of creosote. The pure creosote is distinguished from the impure or that containing Phenols and Carbolic acid by the following tests: first, pure creosote forms a transparent fluid with collodium, whereas impure creosote and carbolic acid gives with about two-thirds of their volume of collodium a gelatinous mass. Second, pure creosote is nearly insoluble in glycerine, and carbolic acid is soluble in all proportions in glycerine. Third, alcohol and ferric-chloride added to pure creosote produce a green solution which is turned brown by adding water, whereas alcohol and ferric chloride added to carbolic acid makes a brown solution, which is turned blue by the addition of water. These three tests are very simple and can be carried out by any doctor. From the above analysis of creosote any doctor can readily see the great importance of

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being very careful, and prudent in selecting a pure preparation of creosote. We cannot be too cautious about the preparation we prescribe, and if we wish success we must be positive that our patients are getting the pure article or we will certainly fail in our anticipated results, and of course come to the conclusion that creosote is not of the therapeutic value some few would try to make us believe it to be. I feel that I cannot put too much stress on the great necessity of seeking out the purest samples and administering only the preparation free from impurities. I find in my very limited experience that the white label creosote manufactured by T. Morson & Son can be given in larger doses and with better results than any preparation I ever used. They claim it is made by a double distillation of tar from pine wood instead of beech wood tar. Yet, on account of the constant inquiry for beech wood creosote they do supply both kinds, but they are entirely different and should not be confounded. The white label creosote contains less of the objectionable substances found in many samples of creosote. Such as Phenols, Cresols and Phlorols. This fact accounts for patients being able to take larger doses with safety.

Dose.—The dose is very important as no one rule can be laid down that will suit all cases. The dose should be given to suit the particular patient and it depends upon what the drug is being given for. Of course, the dose should not be the same in every case, hence here hinges the success of one doctor and the down fall of another. I want to put great emphasis upon the important fact that a large dose is not always the best, and the necessity of a close vigil and regulating the dose to suit each patient's constitution. The dose of creosote depends upon what it is given for: example, one or two minims is sufficient to allay vomiting, three to five drops is sufficient in cases of diarrhoea and intestinal disorders, or for an intestinal antiseptic, and ten to fifteen minims is usually large enough dose in pneumonia and bronchitis, but we usually have to give thirty to one hundred drops in cases of phthisis pulmonalis. I never gave over eighty drops of beech wood creosote, but have given Morson's in hundred-drop doses three times a day with very gratifying results.

Mode of Administration.—Creosote may be administered internally, subcutaneously, externally, by inhalations, and it has been thrown down into the lungs combined with a hydrocarbon oil. Of these several modes of administration giving it internally has proven in my experience to be the best. When a pure article is used there are no

objections to giving it "per orem." I am skeptical about the statements I have seen as to creosote's use subcutaneously. A few doses may be given in that way, but it could not be long continued. It produces a swollen, reddened, tender area from 1-2 to an inch in size around the point of injection, which lasts for two or three days. This terminates in an induration of longer duration. This renders impracticable the continued use of it in this way, and its continued use is necessary in most cases, but there is nothing of special advantage to be gained by its hypodermic use, for when taken internally it is readily absorbed into the system unchanged and goes to the blood as pure creosote. I have never practiced throwing creosote directly into the lungs and cannot see any advantage to be gained by it, in fact it could not be administered in this way so as to reach and penetrate a tubercle in the alveoli. If it does not reach and penetrate the tubercles of the alveoli, it is immediately thrown off by the cilli of the bronchi, and could only be of advantage in a local way in tubercular bronchitis and tubercular laryngitis. There are so many other better local antiseptics that are not so disagreeable. If it is to be given to destroy *pas cocci* in the bronchi, it would be better to give some less disagreeable and better local antiseptic. I do not claim any decided therapeutic proprieties for pure creosote by local application. It has a very great preserving power, and it is claimed to have, to some extent, a local anæsthetic action. I do not believe pure creosote has any anæsthetic properties. It is the impure article that has this effect, and it is due to the carbolic acid it contains. Creosote is an excellent antiseptic, and is absorbed into the blood unchanged so we have the blood carrying to every part of the body an antiseptic and preserving fluid. This creosote charged blood goes to every organ of the body, destroying germs or rendering the soil less fertile for them as it goes. Creosote is eliminated principally by the lungs, kidneys and skin. It is largely excreted by the lungs, hence its special value as a pulmonary antiseptic. All the impure blood goes to the lungs to be purified before being circulated over the body. The lungs are therefore more thoroughly saturated with the creosote than any other one viscus of the body. The pulmonic circulation is small compared with the systemic circulation, and as all the blood of the body is forced through it, the lungs are thoroughly bathed with this creosote-charged blood to a greater degree than any other viscus of the body. Really, the entire lung tissue is thoroughly permeated with the drug, both through the circula-

tion and by excretion, hence the fallacy of giving it by throwing it down into the lungs or by subcutaneous injections, for it reaches every minute portion of the lung when given internally. I believe in giving creosote until my patient is saturated with the drug. In tuberculosis pulmonalis to reap permanent results it must be continued a long time after every symptom of the disease has disappeared. I would suggest that it be kept up at least 12 months after the patient is apparently cured. It will not impair digestion, but aid it if a pure sample be administered. I have been using creosote regularly for three years, and since I began to test each sample and to use only the preparations that prove to be pure, I have not had a single case to fail to take any amount I gave, without any complaint, such as burning the stomach or causing indigestion. On the contrary, it invariably aids digestion, increases the flow of the gastric juice, prevents fermentation and increases the appetite. I usually give it in capsules along with teraline or compound syrup of hyphosphites. Sometimes I give it alone having patient to take it about the middle of each meal, so it does not enter the stomach while empty and the meals serve as a vehicle to dilute it. I usually begin with fifteen or twenty drops and increase one drop a day until forty or fifty drops three times a day is reached. I let them take that amount for a few weeks, then if they do not seem to be still saturated I have them to increase at the rate of three or more drops per day until sixty or seventy drops three times a day is reached. I rarely ever have a patient that demands over fifty drops three times a day. There are some few cases that demand more, but a great many are given more when it is not actually necessary. Large doses of creosote are sometimes a necessity, but I do not think we should give a hundred drops in every case of tuberculosis that comes under our care, simply because some other doctor has given that amount and had success. As stated above, it is actually a necessity in some cases but I believe them to be rare.

Uses.—The uses of creosote are legion, and yet it is not used as frequent and as varied as it should be. It can be given to advantage in small doses in the following diseases vomiting, diarrhoea and especially spring diarrhoeas caused from fermentation, cholera, sea sickness, etc. It is used as a gargle in salivation and in ointments for ring worm and various cutaneous affections and in malignant and indolent ulcers, but its greatest service is in pulmonary diseases. It might almost be called a specific in pulmonary tuberculosis in its early

stages. I have used it with decided advantage and very gratifying results in pneumonia. It certainly is of service in acute pneumonia. I have used it in five cases during the past winter. I gave them twelve drops in a capsule ever four or five hours day and night. I found it would relieve the cough when present, render breathing less labored, slightly lower the temperature and lessens the virulence of the pneumococci, and thus decrease the auto-intoxication, hence there was less depression causing less demand for stimulation and in this way decrease the danger of death. One case I think worth mentioning, as I gave him nothing but creosote and tincture of aconite: Negro, aged 30 years, occupation, stone layer, fell in water on Saturday, I was called to see him the following Tuesday night, found him with a temperature of 103 F., rapid bounding pulse, respiration accelerated and complaining of a catch in his side, he had a hacking cough with some bloody expectoration. I gave him seven grains of calomel and soda and five grains of acetanilid and salol, saw him next morning, bowels had acted freely, but he was no better and had not rested all night. I gave him twelve drops of creosote and three of tincture of aconite every four hours, saw him next day much improved. I kept him on same treatment for three days, when I left off the aconite. He improved steadily from the beginning, his expectoration cleared up, cough steadily improved, pulse was better and temperature gradually went off. He sat up on the seventh day, he had a rapid and uneventful recovery. My limited experience with creosote in pneumonia has been very gratifying.

The Spirit of Commercialism in Modern Materia-Medica and Therapeutics.

By B. R. Graham, M. D., Wallace, N. C.

The spirit of commercialism which is fast prevailing our materia-medica and therapeutics of to-day is one of the growing evils of our profession and threatens to rob us of that profound and almost sacred respect in which our profession was once regarded, and demands our urgent consideration.

It does not take the eye of Newton, nor the brain of Bacon to discern a vast difference in the faith and confidence accorded the profession of to-day, and that enjoyed by our predecessors of twenty years ago.

What is the cause of this apparent lack

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of appreciation of the skill of the profession of to-day, with all our boasted advancement in science? We all know that the modern physician is far better equipped and more able to make a correct diagnosis, has more accurate conception of the etiology, pathology, and treatment of disease than his predecessors, but in spite of these superior endowments he fails to command the same respect and enjoy the same reverence from the laity.

A superior intelligence on the part of the public may account to some extent for this change, but by no means is entirely responsible. In my opinion we may look within our own ranks for the cause, and that is spirit of commercialism, which we are allowing to deluge our materia-medica with countless hordes semi-proprietary preparations, forced upon the market for private gain by enterprising manufacturers, who are dominated by commercial motives and have no interest in the profession, save as a means of promoting their selfish and mercenary interest through our recognition and endorsement of their highly vaunted nostrums. I claim that it is unjust to our intelligence, a travesty upon the principals of scientific therapeutics and the vilest empiricism for us to foster this iniquitous traffic by endorsing and prescribing remedies of whose therapeutic value we know little, and of whose chemical composition we know nothing. It adds no dignity to our profession and their indiscriminate use should soon bring us into deserving disrepute with all legitimate practitioners.

The self-respecting physician who has devoted four years and much money to the acquirement of an education for the one special purpose of treating disease in an intelligent and scientific manner, has the right to know and demand the true and exact composition of the things he is begged to prescribe. When we are asked to prescribe an article whose formula is purposely withheld, it should be regarded as a direct slur at our educational training and professional ability. This is the opinion of a growing number of reputable physicians who are withholding their support and discontenancing such unscientific methods. May the time be nigh when no one will have the temerity to solicit the support of the medical profession, unless he can do so recognizing our right to know and demand the correct formula of his product. He can have the process of manufacture protected by a patent, but let us demand a full revelation of its formula, whether a mechanical mixture or a chemical compound.

Our medical journals are aflame with their advertisement offering the "medical profession only" their much lauded reme-

dies for almost every malady to which flesh is heir. Tell me if the physician who prescribes this class of remedies is not as guilty of empiricism as the quack who parades the marvelous virtues of his great discovery through the press and succeeds in fleecing the credulous public? Of the two the quack is the more clever, for he gets the profit on his sale while the physician only receives an additional supply of advertising matter with testimonials from physicians galore who are meeting with unprecedented success in the use of the remedy.

Far be it from my purpose to attack the legitimate efforts of any worthy manufacturer to introduce to the profession a remedy which after exhaustive laboratory experiments, promise to give uniform and forable results. We should foster and encourage manufacturing chemist along this line in every possible manner, for this is our true source of progress and advancement. To such pioneers, who are making original research and investigation in this field are we indebted for our most valuable modern acquisition in materia-medica and we should give them our heartiest co-operation in the way of clinical tests and reports upon new preparations.

I believe that we are bound by the most sacred obligations to use our best judgment and endeavors for the good of every one who comes under our professional care, and in so doing we should not adopt a narrow and exclusive system, and prejudice our minds against ascertained truths from whatever source derived, for by so doing we would fetter our judgement, abridge our usefulness and make ourselves unfit for fellowship in liberal medicine. But to countenance the many proprietary preparations offered through the advertising columns of our journals is contrary to our profession and financial interest, and the interest of scientific medicine.

No department of our profession to-day offers greater opportunity to the young physician of ability and industry than does the field of internal medicine. While the brilliant results of modern surgery dazzles the public and offers greater emoluments and a more enviable reputation, because the work is such that its results are seen, and more fully appreciated, still I deem say no department of our science demands closer study, a more analytic mind or a more careful discrimination than the department of internal medicine.

"The evolution of pathology as developed by the microscope, our ever increasing knowledge as to the cause of disease as demonstrated by bacteriology and our truer insight into the physiological action of drugs and their potency for relief by a ra-

tional and intelligent administration should stimulate us to more earnest work in the direction of scientific therapeutics and induce us to turn our backs on pretence, ignorance and empiricism as represented by a servitude to the omnipresent proprietary preparations of the day," products of brains ignorant of physiology and rational therapeutic and actuated solely by a spirit of commercialism.

The Clinical Aspects, Suggesting, or Indicating Cancer of the Uterus.*

By J. Ernest Stokes, M.D., Salisbury,
N. C.

No pelvic condition suggests to the Gynecologist, perhaps a greater helplessness, a more profound sense of the inability to conquer, cope with, or even alleviate in so appalling majority of instances, as the pathological lesion—Cancer of the Uterus, when borne to recognition through an opportunity offered, by a late appreciation of the clinical aspects.

The more especially when, as is so often the case, the examination follows on a tardy, indefinite appreciation that even any diseased condition exists, either by the patient herself, or the patient's physician.

Can there be any pathological process, within that class of cases popularly known as diseases of women, which demands the more ready and willing co-operation of woman-kind, with the medical attendant, than a carcinomatous process within the uterus? Such co-operation should exist even with the slightest manifestation of the presence of such a process.

While on the other hand, the medical attendant should be conscience-stricken, and filled with an ever depressing appreciation of duty not performed, if he once fails to listen to, or ignores one single significant complaint of his patient, or again, does not insist upon a thorough examination after he has noted a suggestive possibility of this pathological process in a patient.

The main causes for the so frequently belated recognition of the Clinical Aspects, of Cancer of the Uterus are threefold:

1st. Cases, in which the clinical symptoms appear late, are not marked, and are not appreciated by the patient, through her ignorance.

2nd. Cases in which through the great sensibility of the patient, no mention is made by her of the existing symptom, nor advice solicited.

3rd. Cases in which the medical attend-

ant failed to duly appreciate the clinical symptoms related to him, failing to make a careful vaginal examination, or making one fails to appreciate the clinical aspects suggesting, or indicating carcinoma.

The profession at large clearly recognizes, and the laity should be educated up to the incalculable importance of the very earliest possible recognition of every form of malignancy. How, in no other pathological process will a short delay, or a slight procrastination more quickly convert the possible eradicable stage into the impossible, the ineradicable.

The duty of the physician is first to educate, and most earnestly impress upon woman the great necessity of noting and relating all irregularities, and symptoms—however, even remotely referable to the uterus they are. Then turning to himself, he should ever bear in mind the terrible frequency with which cancer of the uterus occurs, its harrowing results, and its frequently fatal ending.

With these facts in mind, one will not likely let the earlier symptoms of cancer of the uterus escape him. The physician will thus place himself in a way towards obtaining a vaginal examination, and from this examination he obtains the clinical aspects, which may be present, of any local tissue changes.

From this moment on, the burden of responsibility is upon the medical attendant to recognize the Clinical Aspects, and their significance. He should inform and impress his patient with these facts, and above all he should urge that subsequent action be taken with all possible haste.

The clinical aspects of cancer of the uterus, are directly connected with these facts just noted. For the presence of this lesion is almost invariably appreciated after a fatal delay—yet acknowledged by physicians, surgeons and pathologists that the only possible hope of eradicating a cancer of the uterus lies in an early operation—which must necessarily be preceded by an early diagnosis—i.e., a full recognition of the first clinical aspects suggesting the lesion.

Again it is acknowledged, that the frequency in recurrence of the carcinomatous process, following an enucleation is due without doubt to the state of progress the disease had made previous to the primary operation, or possibly to an unavoidable transplantation of the carcinomatous elements into adjoining healthy area, owing to the advanced state of destruction the tissue was in, and which bears more directly upon the text of this paper—that the earliest clinical aspect of this disease is, in every detail, different from the clinical

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picture presented, both constitutionally and locally, by the extension taking place in the later stages.

Cancer of the uterus is a distinctly local process, limited to narrow confines in its incipency. The etiology of cancer of the uterus, along with the etiology of cancer occurring elsewhere, remains undetermined. Notwithstanding, that from the time of Waldeyer's conclusion, that all carcinomata owe their development to a proliferation of epithelium, up to the more recent theory—the parasitic, which concludes that carcinoma is an infectious disease of a slow type. No subject in pathology has been given more enormous, untiring labor and attention. From a clinical standpoint Dr. Kelly, has called attention to a significant causal relation, between cancer of the cervix and the traumatism of childbirth. Out of fifty of his cases of epithelioma of the cervix, twelve had been pregnant. In eleven cases of adeno-carcinoma of the body it was found ten were married. In thirteen cases of adeno-carcinoma of the cervix, twelve had been pregnant.

Frequency of Cancer of the Uterus.

Carcinoma affects the cervix uteri more often than any other part of the body. W. R. Williams computed in 1896, that there were eight thousand women suffering in London, with carcinoma of the uterus. Dr. Welcn places the uterus first in the list of organs most frequently affected with primary cancer, and concludes that somewhat less than one third of all primary cancers are seated in that organ.

From this point on, the different varieties of cancer of the uterus present certain clinical aspects not in common, so that for the sake of clearness, Dr. Cullen's histologic classification will be used, giving first a brief anatomical description of the uterus, then the clinical aspect of the several types of cancer.

Anatomy of the Uterus.

The uterus in the adult is pear shaped, averaging about eight centimetres in length, and from 4.5 centimetres in its greatest transverse diameter. Its posterior surface is convex, the anterior aspect being flattened, or slightly concave.

The lower third, or cervix projects down into the vagina for one centimeter or so, is rounded in contour, containing a small central opening, "the external os." This opening may be circular, or as a transverse slit in appearance, with smooth closely adjusted edges. In women who have borne children there is always a roughening or irregularity of these edges, due to more or less laceration, subsequent to labor.

This slit or opening divides the cervix into an anterior and a posterior lip. The latter being usually somewhat longer, and thinner. The surface is smooth and of a pinkish hue. If the laceration of the "external os," is extensive there is apt to be a gaping of the lips, with an eversion of the bright red inner lining—the mucosa. This latter fact, should be invariably noted by the medical attendant, and most carefully watched, and followed from time to time. For it is in just these cases, with a most inexplicable frequency, that carcinoma of the cervix is subsequently noted.

The uterine walls vary from 1.3 to 2 centimeters in thickness. The muscular walls of the body may be divided into three fairly well defined layers, an inner longitudinal, lying in direct contact with the mucosa; a middle layer, much thicker, consisting of bundles of fibres having a somewhat circular arrangement, and containing many large veins; and an outer muscular layer, composed of longitudinally arranged fibres.

The interior of the body of the uterus consists of a narrow cavity extending from the "internal os" to the fundus, between the anterior and posterior walls. It averages about four centimeters in length, and from three to four centimeters in breadth.

The mucosa or lining membrane is covered by one layer of cylindrical ciliated epithelium. It is yellowish pink in color, and made up of tubular glands, and an intervening substance the stroma.

The cervical canal extends from the "external os" to the "internal os." It is lined by mucus membrane of a reddish hue which is covered by cylindrical epithelium, though at times the squamous epithelium of the vaginal portion extends well up into the canal.

This distribution of the epithelium bears a direct relation to the clinical aspects of cancer of the uterus, as the varieties of carcinoma which will be taken up are of a histologic classification.

As the blood, nerve, and lymphatic supply to the uterus bear no especial relation to the clinical aspects of carcinoma of the organ, they will not be taken up here.

Examination per Vaginem.

One of the first important steps towards obtaining a decisive knowledge of the presence of carcinoma of the uterus is obtained by a vaginal examination. The value of such examination, however, is dependant on how thorough, careful and systematic a manner it is conducted.

In the earlier stages of carcinoma of the cervix, and in all the stages of carcinoma of the body of the uterus, much more definite information can be obtained by a digital ex-

amination, i. e., by the sense of touch, than by the too frequent practice of employing the speculum and sight.

One should train the sense of touch as to the normal condition of the vagina, the cervix and the body of the uterus. It will then be possible to note accurately a deviation from the normal consistency of the cervix, by touch, which may be followed then by inspection if necessary.

Classification of the Carcinoma of the Uterus.

- 1st. Squamous-cell Carcinoma of the Cervix—Epithelioma.
- 2nd. Adeno-Carcinoma of the Cervix.
- 3rd. Adeno-Carcinoma of the Body.
- 4th. Squamous-cell Carcinoma of the Body. —

The Clinical Aspects of Cancer of the Uterus in General.

The Clinical aspects of the several varieties in the above classification of cancer of the uterus differ distinctly in some respects.

In other respects, however, the clinical picture is common to each variety.

The first and most significant point is that in the earliest stages of every form of cancer of the uterus, no definite, nor well defined symptoms may be present.

The Clinical Aspect may be merely suggestive to the slightest degree, and the only possible way to obtain a true, definite diagnosis in such cases is by curettage.

It then becomes every physician to be always on the alert, to urge and insist upon the uterus being curetted, where there is slightest suspicion of cancer of the uterus, however insignificant the deviation from the normal may be. His obligation is not, however, fulfilled, even then, unless the opinion of a competent pathologist is obtained.

In the light of the present perfection to which the pathologists of to-day have risen in the diagnosis of cancer of the uterus through histological examinations, every physician who neglects to subject the material obtained through a curettage to a histological examination assumes a grave reprehensibility. He may be gravely reprehensible, if in later years, the same patient presents an advanced condition of cancer of the uterus. It matters not for what reason the uterus was curetted, the scraping should be invariably examined. No matter how slight the uterine hemorrhage may be—if it cannot be explained—curettage should be performed.

In the earliest stages of cancer of the uterus a diagnosis positive enough to warrant any radical measures can not be made without first a histological examination of

the curettings, or of small pieces of tissue obtained from the uterus in question.

Constitutional Symptoms.

The constitutional symptoms of cancer of the uterus do not as a rule manifest themselves until the second stage, or that stage in which the local symptoms are so pronounced as to attract attention of the physician, and arouse the apprehension of the patient. Nevertheless they are of value—of great value—to the physician in urging or justifying an examination in those cases in which the patient lives in a vain hope that the steadily-increasing hemorrhages are the forerunner of the change of life, and consequently consoles herself, keeping her own counsel accordingly.

Pain, though by no means a constant symptom, is at times prominent. It is chiefly lumbar very acute at times, and with it there are neuralgic radiations in different directions.

The digestive symptoms, loss of appetite, vomiting, constipation, or diarrhea may be present. The skin becomes a pale yellow, is dry and harsh. Cystitis, with its frequent, painful urination, comes on, followed by a sub-acute uremic condition. This condition is rapidly followed by emaciation, general lassitude and even mental aberrations.

Local Clinical Aspects of Cancer of the Uterus.

1st. Variety Epithelioma.—This form of carcinoma of the cervix is usually divided into three states. It is most common near the menopause and is not as a rule associated with any irregularity of menstruation.

The First Stage, or the Condition of Hardness and Induration of the Cervix. The first symptom perceived by the patient is usually a hemorrhage of a very mild degree; often it is just a bloody discharge. This is the form and stage of cancer of the uterus, in which the patients are most apt to attribute the flow of blood to a prolongation of the period, or if the menopause has come on, then to a return of the menstrual flow. The escape of blood varies as to interval. It may be brought on by coitus or some active exertion.

On making the vaginal examination, the cervix will be found enlarged, hard, infiltrated, of a smooth glazed appearance, or at times a few finger-like processes projecting from its surface. The examination may cause more or less of a hemorrhage, again a very common appearance is that of a cauliflower-growth, with numerous fissures and excrescences.

Second Stage.—This stage presents the first distinct constitutional symptoms men-

tioned above, though as a rule, the general appearance of the patient is good, and symptoms very slight. The hemorrhages increase in amount and frequency. During the interval between the hemorrhages there is generally a vaginal discharge. This at first is thin and watery, of a fetid odor, and irritating. The vaginal examination reveals a general breaking down of the cauliflower growth of the first stage. Small bits of tissue can be brought away with infiltrated edges. The induration of the edges may extend up into the vaginal vault.

Third Stage.—In this stage the local condition is an exaggerated degree of the second stage. The constitutional symptoms become marked and steadily progressive. The pain in the lumbar region extends down the thighs and legs. Blood is passed with the urine and patient takes to her bed.

Locally there is a fetid, loathsome odor. The hemorrhages become excessive, even alarming, and the patient is beyond permanent aid. How different a picture, these many many cases would make had only patient and physician co-operated and an early diagnosis ensued.

Second Variety.—Adeno-Carcinoma of the cervix.

This variety occurs most often between the ages of 45 and 50. Extension is exceedingly rapid and the growth is of the most malignant type.

This growth may occur as a rounded nodule, at times involving the entire cervix before any breaking down takes place. Later this carcinomatous nodule breaks down forming a sloughing cavity continuous with the normal cervical canal.

If the lesion commences in the canal near external os, the cervical lips are rapidly involved, and soon appear hardened, thickened, and glazed in appearance.

The loss of substance however, is not marked as in the first variety—the epithelioma.

In this variety, the tendency is to extend laterally, at times before there is any indication of involment of the external os, or breaking down of the cervical tissue.

Hence, on examination it is very important to note the mobility of the uterus and the presence of any induration laterally to cervix.

3rd. Variety. Adeno-carcinoma and squamous cell carcinoma of the body of the uterus.

This variety occurs at a later period of life than any of the others, generally between fifty and sixty years.

At the beginning, the uterus generally is normal in size, as the lesion is very circumscribed. Later, however, the fundus uteri

increases in size and becomes soft and flabby to the touch. Growth is slow and no positive diagnosis can be made, save by curettage and a histologic examination made of the tissue, thus obtained.

Deciduoma Malignum.

Deciduoma malignum is another morbid condition, which though distinct from cancer of the uterus, so intimately involves the uterus that it may not be out of place to mention it here.

The following points have been taken directly from Cullen, on Cancer of the Uterus.

It is a malignant process, which is found in the body of the uterus during, or immediately following pregnancy, at the placental site. The growth is irregular in form, reddish in color and friable. It tends to form metastases, which are frequently found scattered through out the vagina.

Dorland has pointed out the close relation existing between the occurrence of a vesicular mole and the appearance of deciduoma malignum—as in over forty-three per cent. of cases tabulated by him, there had been a history of the expulsion of a vesicular mole, prior to the appearance of the disease.

This fact should impress upon us the great importance in every instance, in which a mole is expelled to make an immediate histological examination of many portions of the specimen. If there be signs of malignancy not definite enough to warrant very radical measures, the uterus may then be curetted.

As might be supposed, severe and frequent uterine hemorrhages are among the first indications. Later stages develop a thin offensive watery discharge, pain in lower abdomen follows; the patient becoming anæmic and emaciated.

As time goes on there is odema of the the vulva, with vaginal metastases appearing. The patient becomes more and more prostrated, and there may be hemoptysis due to pulmonary metastases. At times there is a slight elevation of temperature, due to absorption of septic materia.

Differential Diagnosis of Cancer of the Uterus.

The differential diagnosis of cancer of the uterus will not be taken up here, as in every instance, without the possibility of an excuse, a histologic examination should be obtained, where there is a shade of doubt. In concluding I can only urge again upon the medical profession, the great opportunity which is theirs to save the lives of many women—by the one

vital act.—An Early Recognition of the Clinical Aspects Cancer of the Uterus.

In the last six cases, which I have seen, in which the clinical diagnosis of cancer of the uterus was verified by the histologic examination, every case, save one presented an advanced condition of the third stage. Absolutely beyond any possible radical measures.

The conditions of these patient's, both locally and constitutionally simply presented that hopelessly destructive process, of the advanced stages of cancer of the uterus.

Report of the Chairman of Medical Jurisprudence and State Medicine.

By J. L. Nicholson, M. D., Richlands, N. C.

Medical jurisprudence, it has been well said, "owes its power to knowledge derived from every branch of medicine; but the law determines how far this power shall be utilized in the administration of justice." The century just closed opened in America with an almost complete neglect of this department of medicine. It is common knowledge that little significance was attached in those days, either by Bench or Bar, to the views or opinions of medical men. And to say that the science of medical jurisprudence, with us, even up to this, has signally failed to command that recognition due it, even from the medical profession itself, would be stating a truth well known to the least of us. Even our medical schools have been quite neglectful as to our training for the duties of medical experts and as to rights as witnesses.

The first sound teaching of Legal Medicine in any country was done in the early part of the 17th Century by the splendid diplomat, scholar and physician, Paul Zachias, of Italy, whose writings on the elementary truths of the science could be read now with much interest.

According to Clark Bell, "Germany has had for more than two centuries an organization of medico-legal officials, who are required by law to be qualified by an especial education not only to procure the medical facts needed by the courts, but to estimate their weight for the benefit of the courts." To favorable legislation, and to the friendly care of the Government, Germany's pre-eminence in legal medicine is to a great extent due.

France, surpassed by no nation in the culture and advancement of medical science, in the latter half of the 16th and the 17th Centuries enacted laws which formed the

basis to the study, culture and development of this branch of medicine.

Prior to the century now gone, Great Britain had given but little attention to medico-legal questions, and she unfortunately transmitted to her American colonies "laws," says Prof. Chaille, "barbarously conspicuous for the absence of provisions to apply medical knowledge to the administration of justice." With this unenviable inheritance to begin with, and with the States leaving the culture of medical science almost solely to individual enterprise, making no demand for and offering no inducement to competent medical experts, who can wonder at the backward development so apparent even to this day of this branch of State medicine?

Justice, during the middle ages, was in great part an administration of retaliating punishment. For criminals condemned to death, all kinds of cruel tortures were cunningly invented, so that their suffering in death could be intensified and prolonged. Equally revolting was the superstition and ignorance of that period as displayed in medico-legal literature and in the decisions of the courts touching medical questions. Doctors with all seriousness discussed whether a woman could be got with child by the devil or by a dream. French judges legitimized an infant in a case where the husband had been separated four years from the mother, on the ground that the child owned its paternity to a dream. Doctors taught that grossly deformed infants had a beastial parentage, and judges, but little more than 100 years ago, held that such children had "no inheritable blood."

In the State of New York, even as late as 1824, the court accepted the long-admitted doctrine, that in the presence of the murderer his victim's wounds "did open their congealed mouths and bleed afresh."

"The highest medico-legal authorities" says Chaille in his Centennial Address, of which I make free use, taught belief in ghosts, witches, and possession by the devil; and united with the clergy until 1752 in denouncing all disbelievers thereof as heretics and atheists. They found demoniacs for the jails and the stake, where we find patients for the doctor and the asylum.

The distinguished medico-legist, Hoffman, commended to the barbarity of the law those who vomited nails, hair, wax, glass or leather as unquestioned witches. Lord Chancellor Blackstone, near the close of the 18th Century, taught that "to deny the existence of witchcraft and sorcery is at once to flatly contradict the revealed word of God."

Certainly since the early part of the 19th

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Century we have moved away from these revolting practices and teachings. So much so that we can exclaim with Carlye, "Behold, a new era has come; the future is all the brighter that the past was base."

While the States designedly have done but little through direct legislation to promote and develop forensic medicine, the writings and labors of Benjamin Rush, Theodore Beck, Isaac Ray, Alfred Taylor and many others, have influenced society and law to an extent difficult to overestimate. Scarcely less valuable have been the services of our chemists, as Wormley, Reese, Vaughan, Leffman, Doremus, in the development of Toxicology, making it a distinct department of State medicine.

In this day of scientific medicine, when the physician, with the increasing confidence of society and the courts, is called upon to give expert testimony in thousands of cases involving medico-legal autopsies, malpractice, abortion, poisoning, railway accidents, &c., the course of study offered by our schools of medicine on this line is not commensurate with the importance of the subject. There is scarcely a single American college in which medical jurisprudence holds a distinct chair as an independent branch of medicine. The average time devoted to its distinct teaching by twenty of our best schools throughout the prescribed four years' course of study, as shown by the examination of the different catalogues, aggregate but little more than that found in the course of a single day and night. This fact, however, should be no surprise since the State makes no specific demand for medico-legal experts, every practitioner being adjudged to have sufficient knowledge to furnish the best evidence to the courts. No wonder, then, that the profession is often humiliated by the partisan feelings and contradictory testimony and opinions frequently displayed by medical men as witnesses.

To the Board of Medical Examiners the State has entrusted the full responsibility of providing physicians who in every way shall be qualified for the performance of this important work. The ever-increasing efficiency of their licentiates declares unmistakably the immense benefit these Boards are to the State and to the profession.

These Examining Boards now found in many States of the Union have been an effective barrier against the entrance of quacks and half-educated men into the profession. To meet the requirements of these Boards many of our colleges have been driven, as it were, to lengthen their course of lectures and improve their methods of instruction. With such power for good in their hands, with a concert of action, the

remedy is theirs to secure from the schools the proper attention to the study of medical jurisprudence.

Another branch of State medicine, that of governmental power to protect public health, and the exercise of this power through Federal, State, county and municipal health officers has of late years developed into great prominence and usefulness.

The first Public Health Congress in America was held scarcely a quarter of a century ago. To-day there exists Health Boards in almost every State and Province of North America. National quarantine service co-operates with State health officials in guarding thousands of miles of seaboard from the invasion of contagious diseases. Local boards well nigh innumerable are constantly improving local sanitary conditions and watching in ceaseless vigils for the black birth of contagious epidemics which hitherto have spread unmolested, carrying death and dismay in their path.

The practical applications of the innumerable discoveries made in the field of biology within the last few years have rendered far more efficient governmental regulations of many vital sanitary questions. "Science desires not isolation, but freely combines with every effort toward the bettering of man's estate."

The last twenty-five years have been truly called the "golden age of public health." Human suffering has been wonderfully mitigated, and human life perceptibly lengthened under the guiding influence of modern sanitation. Yet, how slow the people are to apply to their lives laws as old as the decalog—the laws of health.

The fatalistic belief that disease is the manifestation of God's wrath toward man, punishment for some specific sin, was for centuries so deepseated that preventive medicine could not have been applied to any effect. "Master who did sin this man, or his parents, that he was born blind"? was a question asked some 2,000 years ago, and carries with it this idea—that human affliction is the unavoidable penalty for sins committed. When pressed by the cruel scourge of some pestilence, all sorts of self-inflicted punishments were practiced to appease Divine wrath.

According to Kober, the faculty of Paris attributed the occurrence of the bubonic plague in 1345 to the conjunction of planets on a certain day. The faculty of Liepsig, with equal gravity asserted that it was connected with earthquakes, unseen waves of air, inundations, &c.

As late as 1760 the deposits of ordure near dwellings were considered healthful, on the theory that the filth absorbed the

unwholesome particles of the air, which otherwise would be taken into the human system. However, the repeated visitation of the Oriental scourge finally evoked from all Europe efforts at sanitary reform, and laws for health seem to have been the outcome of pestilence. Man has been taught to respect and rightly observe nature's laws, only by the very harshness of nature herself.

Society now, through modern sanitary teaching, is beginning to understand that every death caused by unsanitary conditions is but a natural consequence; and that the toleration of such malignant conditions which are capable of being eradicated, can be considered in its essence scarcely less than a crime.

Within the last generation the immense work of the American Public Health Association, the American Medical Association, through its Section on State Medicine, the American Sanitary Association, together with the labors of many other National and State Associations and Sanitary Conventions, have been the leading factors in moulding and educating public opinion in matters of sanitation and in securing the enactment of proper health laws. So rapid has been our progress in this respect that it has been seriously said that no other country in the world is better equipped for effective sanitary service than the United States.

The danger to public health in default of *Rural Hygiene* is still a pressing one, one which demands the serious thought of sanitary officers and law-makers alike.

Startling as should seem the statement, but nevertheless is it true, that the most healthful residence is no longer to be found in the country but in the great cities. The one factor of water supply from private wells, surrounded by a soil long polluted from continuous habitation readily accounts for the common occurrence of so much typhoid fever among our country people. Probably three cases of this fever for every single case due to unwholesome public water supply may be attributed directly to the use of water from unguarded private wells. The efforts made by sanitary officials to instruct our people how to protect their drinking water from animal excreta have not as yet borne much fruit.

The people must learn for their own good how to protect their private wells from poisonous bacterial infection, but they must also bear in mind that marketable products such as fresh meats, milk and butter when washed with unwholesome water become on the market unthought of dangers to the health of others. Moreover, the continued existence of local nuisances together with

the frequently slow and half-indifferent attention to outbreaks of contagious diseases are not matters trivial to the public health. A more careful sanitary care over the public water-sheds, the rigid enforcement of laws abating the existence of local nuisances; placing the responsibility legally upon the individual who carelessly spreads a contagious disease with which he may be affected, thus causing every man to realize that he is under obligation to society not to imperil the life and health of others, and that the law has the right to enforce the observance of this duty, should tend to avoid the evil consequences of such conditions.

The enforcement of the law announced some years ago by Judge Dixon, of New Jersey, would exert a most salutary effect. It is this: "If a man conscious that he carries about with him the germs of a contagious disease, recklessly expose the health and the lives of others, he is a public nuisance and a criminal, and may be held responsible for his conduct; and further, that where a person knowingly communicates a contagious disease to another and death results, the crime is that of manslaughter. (Sanitarian, Vol. xi, 74.)

The eradication of preventable diseases is to-day the highest aim of scientific medicine.

First of all our people must be made familiar with the conditions of home life which favor the production of disease. Any evil is said to be half removed when its cause is thoroughly exposed. To accomplish this work, in the rural districts especially, where the benefits of enforced sanitation has not been experienced is a problem of no small magnitude. Its solution we believe is to be found directly and only through a more general sanitary education.

Education is the shortest road to ideal sanitation.

For while the State has a well established right to enforce laws that ensure the preservation of public health, even though personal and property rights be directly interfered with, all such laws to be properly effective must be sustained by an appreciative public intelligence and must be in harmony with public sentiment. The steady diminution of tuberculosis now seen in almost every civilized state attributable solely to the fact that knowledge of its contagious character, and the means of its conveyance, has been widely taught the public.

A prominent feature of this idea of education includes, in the first place, an increased efficiency of health officers, State, municipal and county. A course of study leading to the degree of Doctor of Health or Medical sanitation is becoming a press-

ing necessity. Men, having neither the necessary qualifications, nor sufficient interest in their special duties to prompt any increase in their efficiency, are in many instances filling positions on Health Boards. A little office and still less pay, goes a long way with some of us. Has North Carolina a single specially educated sanitarian within her borders? The full time of the Secretary to the State Board of Health could be profitably devoted to this one question of disseminating sanitary knowledge. By lectures to the public and by personal contact and work with county and municipal health officers and with our teachers and schools, he would prove a factor of increased benefit to the State.

Within the borders of North Carolina there are but a few less than 700,000 children of school age—of this number almost half million are enrolled in the public schools. Did ever a better opportunity present itself for the diffusion of the knowledge so vital to the welfare and prosperity of the people? You tell me that the State does provide for the teaching of the elements of Hygiene. The course of study is very limited, and the teachers are but little more acquainted with the principles of public hygiene than is the pupil. Let this instruction be enlarged and become commensurate with its importance. Then will this indifference and ignorance give way to a higher, healthier and more cleanly life.

No less valuable could be the beneficial results if the question of sanitation occupied a prominent place in the instruction given by our high schools, colleges and universities. A short series of lectures on the principles of hygiene and school and home sanitation should be provided especially for school teachers.

Our present knowledge concerning the mosquito as a positive danger to society, by reason of its ability to transmit certain diseases to the human organism is of the highest significance to public health. It has been repeatedly demonstrated beyond the possibility of a doubt that the *Anopheles* mosquito is a prominent, if not the only agent, in the transmission of malaria to man. The theories hitherto in vogue that drinking water, and the so called "miasmatic exhalations of the night" are received now with skepticism, if not absolute disbelief. Manifestly then the removal of the well known conditions forming the propagation of this dangerous and annoying insect is a pressing duty. The drainage and filling of all pools of stagnant water, the systematic treatment by oil of those which cannot be so treated, and the introduction of fishes whose favorite food is the mosquito's larvae, are effective means

at our command to the accomplishment of this work. Sulphur dioxide gas, with its remarkable powers of penetrating all kinds of fabrics, has proven itself the most reliable agent known in the disinfection of dwellings against malaria and all other insect borne diseases. The very common prevalence of malarial affections in most sections, certainly of Eastern North Carolina, make the removal of its immediate cause a question of vital importance. Shall the mere right of possession imply to the fortunate land owner the privilege of harboring within his domain these conditions which foster the production of this malady? Conditions which, if tolerated, inevitably endangers the health of others?

Equally convincing, and even more far-reaching in its sanitary bearing, is the proof obtained through a sense of scientific observations recently instituted by the medical department of our military government in Cuba, that the mosquito, *Culex fasciatus*, is the one prolific agent in the spread of yellow fever.

Dr. Reed and his colleagues, who made these investigations declare as facts that:

1. "Yellow fever is transmitted to the non-immune individual by means of the bite of the mosquito (*C. fasciatus*) that has previously fed on the blood of those sick with this disease.

2. That "yellow fever is not conveyed by formites, hence disinfection of articles of clothing, bedding, or merchandise, supposedly contaminated by contact with those sick with this disease is unnecessary.

3. "A house may be said to be infected with yellow fever only when there are present within its walls contaminated mosquitoes capable of conveying the parasite of this disease.

4. "The spread of yellow fever can be most effectually controlled by measures directed to the destruction of mosquitoes, and the protection of the sick against the bite of these insects."

The practical application these observations was made last year by Major Gorgas in the sanitary management of Havana, the city where yellow fever had hitherto existed for near two centuries in defiance of all previous efforts at sanitation. The usual quarantine regulations and interference with commerce were discontinued; the most thorough measures were instituted to exterminate the mosquitoes and to abolish their breeding places and those sick with the fever were carefully screened from the further bite of the mosquito. The infected dwellings were disinfected by the fumes of pyrethrum for the extermination of the poisoned mosquitoes.

The result of this campaign against mos-

quitoes was that only 18 deaths occurred during the whole year, and there has not been a single case of yellow fever in the city since Sept. 28th, 1901, now 8 months ago.

In view of these facts, it appears that the expensive and annoying methods of disinfection and quarantine heretofore enforced for the suppression of yellow fever epidemics might be greatly modified to say the least. While further and more extended observations would seem to be needful to justify the abolition of present sanitary measures used to control yellow fever outbreaks, certainly these are enough to convince all health officials especially of our Southern cities of the imperative necessity of adopting the best means of exterminating these pests and for the absolute prohibition of conditions favorable to the production.

The recent conclusions of Prof. Koch, viz: that bovine and human tuberculosis are different diseases and practically non-intercommunicable; that man has nothing to fear from tuberculosis of cattle, and hence it is needless to take further precautions against this supposed source of infection, are indeed significant doctrines. Hitherto we have been taught, and clinical evidence is yet abundant, that the heavy mortality in early childhood from tuberculous affections is due to the use of unsterilized milk of the tuberculous cow. That a great peril threatens humanity the world over in the existence of wide-spread bovine tuberculosis, is the belief formerly adhered to by the medical profession. The point at issue is a vital one, and we may fear lest the influence of such noted authority lead to a laxness on the part of health officials in the proper inspection of meats and milks which supply our cities and public institutions. The experiments of Chauveau performed some years ago, together with the recent expensive and convincing investigations of Bhering clearly contradict the conclusions reached by the German scientist. And even if it were demonstrated beyond a doubt that cattle are refractory to human tuberculosis, it does not necessarily follow that man is equally refractory to bovine tuberculosis. Clearly, then, there should be no relaxation of health regulations which restrict the sale of tuberculous food products. The thought is revolting, that meat contaminated with disease germs of whatever sort, should under any circumstances be offered for man's use.

The only safe and proper solution of the situation is the suppression of the sale or use of food products unless such products have been adjudged wholesome by competent health authorities.

The well-established and undisputed fact

that tuberculosis is communicable from man to man chiefly through the agency of dried sputa, leads undisputably to the conclusion that the State is under the highest obligation to separate the victims of this disease from other inmates in its charitable, correctional and penal institutions. Especially is this true of our hospitals for the insane, the inmates of which because of the very nature of their afflictions have but little power of resisting bodily diseases. According to Mays, the insane, idiotic, epileptic and hysterical and members of their families are from 3 to 5 times more subject to consumption than are persons not burdened with nervous and mental ailments.

A recent report made by the superintendent of an English insane asylum shows that by the removal of all consumptive patients to a separate building he has been enabled to reduce the death-rate from this disease within a few years in his hospital fully 50 per cent. Scarcely less gratifying has been the effect following the same action of separating the tuberculous insane from the other inmates in the Illinois Southern Hospital for the insane. The last biannual report made by the superintendents of the three hospitals for the insane of North Carolina show that out of 214 deaths due to all causes which have occurred in these institutions 22.7 per cent. were produced by the one disease tuberculosis. Notwithstanding the repeated appeals made to the Legislature of our State, no effective separations of these patients from the other inmates has yet been furnished, and our unfortunate and afflicted citizens are still exposed to this ever-present and death-dealing disease. No less shameful is the existence of these same conditions in the country homes for the aged and infirm throughout the State.

With these conditions before us—known to us as they are to no other class of North Carolinians—shall we not bend every energy and put forth every effort that we may with concerted action be instrumental in removing from our State the charge of gross neglect to our unfortunate brothers.

Further Observations on Ovarian Cysts in Colored Women.

By Hubert A. Royster, A. B., M. D.,
Raleigh, N. C.

At the beginning of my practice I was steadfastly imbued with the idea which had been held for so many years, that cysts of the ovary rarely or never occurred in negro

*Read before the North Carolina Medical Society, June 10, 1902.

women. Accordingly, it was a matter of surprise during the early part of my gynecological work to come upon three cases within a comparatively short period. These were reported two years ago.¹ While looking up the subject at that time my interest was first enlisted by I. S. Stone's article in which there were collected replies from a large number of the prominent operators in the South. The experience of these different surgeons varied very widely, the consensus of opinion bearing out in most instances the former teaching, except that from New Orleans, where ovarian cysts were found to be quite as frequent in the negro as in the white race. In a comprehensive paper published a year and a half ago,² Dr. Daniel H. Williams of Chicago, refers to my reports as well as to ten others and presents a total of 220 such cases from different observers, thirty-three being in his own practice. He points out some sources of error and insists upon the fact that not only do ovarian cystomas occur in the negro race, but "that the colored woman is as subject to cystic degeneration of the ovaries as the white woman." (Michinard)

In spite of these recent findings, many writers and many teachers continue to reiterate the original doctrine and members of the profession at large still accept it as a fact without question. Ovarian cysts are not thought of as a rule when a negro woman is on the examining table, and, as I stated in a previous paper. They "are likely to be slighted in the diagnosis of doubtful abdominal enlargements" in that race. Abundant evidence exists to prove that these tumors are much more frequent than was formerly supposed. In order to further emphasize this fact, I wish to record my more recent experience.

During the past twelve months I have operated on no less than five ovarian cystomas in negro women. Of these one was a mulatto and the other four of pure negro blood; three had multilocular cysts and two unilocular; the average age was thirty-eight; the number of deaths was two. In all, save one, intestinal adhesions of greater or less extent were encountered and to these were attributable the deaths which occurred—one from post-operative ileus owing to the necessarily prolonged handling and lacerating of the bowels in stripping them off the tumor which they surrounded in wreath-like fashion; and the other from shock produced by unsuccessful attempts to dig the cyst out of a mass of matted intestines, the patient dying six hours after-

wards with the growth still in her abdomen.

Ordinarily, the removal of an ovarian cyst is one of the simplest abdominal operations—one which many an operator is rejoiced to have for a "clinic" case. Opening the abdomen, puncturing and evacuating the cyst, securing the pedicle and closing the wound—all this is quickly and safely done. But the existence of intestinal adhesions, the great bugbear of abdominal surgery, forces upon the operator conditions which tax the skill, and especially the patience of the most resourceful surgeon. It is just this state of affairs which serves to keep up the rather high mortality of ovariectomy in colored women as compared to this operation in white women. The former are either not offered the privilege of the operation or refuse to have it performed until the cyst has, by its growth, become universally adherent. In my experience the operation under these circumstances is as difficult and as dangerous as a hysterectomy. Most colored women will not permit any operative interference before the period of absolute necessity compels them to seek relief or die. It is a hopeful sign when one gets hold of a small-sized, non-adherent cyst of the ovary in a colored woman, as I did in the last one operated on, and is able to remove it with ease and without danger.

In conclusion it may be said that the five cases referred to were all seen at St. Agnes' Hospital, an institution intended exclusively for colored women, where a number are operated upon annually. This may in some measure account for the relatively large percentage.

The Doctor, The Patient, The Importance of Good Roads to Both.*

By M. Eugene Street, M.D., Glendon, North Carolina.

Mr. President:—We have this year seen great interest manifested in road improvement. At the Good Roads Congress held at Raleigh in February the whole State was represented, and the delegation was composed of that class of men who do something. Those men were not there for fun, but they had laid aside their business and gone to that Congress to do something for the further development of the State.

Enough had already been done in the State in the way of road building to prove the great value of good roads. The amount of freight and produce that can be hauled over good roads in a given time is so much

(*) Trans. Tri State Med. Assn., 1900.

(1) Phila. Med., Jour. Dec. 29, 1900.

(2) Loc. Cit.

*Reac before the North Carolina Medical Society, June 10, 1902.

greater than what can be hauled over our average roads that thinking men have made this great effort to wake up the people to their interest. The great importance of good roads to the medical profession in North Carolina enjoins upon us the duty of doing all we can to assist this movement, both collectively and individually,

It is neither practicable nor desirable that we here discuss all the benefits to be derived from good roads, so we will take up only some that are of greatest interest to us in pursuing our calling.

Perhaps the one of greatest interest and importance to the doctor is the *time* to be saved. The city doctor can get around to his calls with a dispatch that is satisfactory, both to his patients and to himself. But the case with the average country doctor going over the average roads is unsatisfactory, both to his patients and to himself, for it requires too long for the patient to have to wait and the doctor has to spend too much of his time on the road. The average country doctor is a man of ability. He is also a medical student, and many are the problems he has to work out for himself. He soon has learned the lesson of self-reliance, and if he runs across something he doesn't understand he generally knows where to look for the desired knowledge, and forthwith proceeds to consult his books and inform himself, if he has the necessary books and the time for it. But he hasn't sufficient time to systematically, and satisfactorily pursue his studies. He takes several good medical journals, but he doesn't have time to read all of the good articles in them. He must just look over them and select to read such articles as have a practical bearing on the cases he has on hand, promising himself that he will read what he knows are worth reading when he gets more time. He may get time to review his journals, but the chances are that he will not. He does not always have so many patients on hand, but he does continually have to spend most of his time on the road, and the most of the road is bad. In not a few instances about the time he reaches the most efficient period of his professional career, he suddenly and sorrowfully realizes that the unnecessary wear and tear of bad roads has so sapped his vitality that he is hopelessly becoming an old man, physically, regardless of the number of his days; for it is a physiological law that the changes wrought by age are as unalterable as the date of one's birth. He soon finds that he cannot continue the practice of medicine with his wonted celerity and powers of physical endurance. He tires sooner and sooner, and it takes longer and longer for the recuperation of his strength. Then his

patrons begin to notice it, and in a little while they see that they cannot depend upon getting him in cases of emergency, in the night, nor in bad weather, and they say: We will have to do without Doctor A. after awhile anyhow, his health is failing fast, and we would as well begin to try Doctor Blank. And one by one they begin to drop away. And it is sad, indeed, to see the doctor who has borne the heat and burden of the day, and the darkness and cold of the night, and the rocks and hills and gullies, and mud and sand of the roads thus dropped by his patrons before he is old enough to be retired—and all because of bad roads. He doesn't enjoy these changed reactions, and it is a mistake to think it is all because of pecuniary interest that he disapproves it; for he has always done all he could for every one who appealed to him until it has become a fixed habit and his second nature to do all he can for all men, when appealed to, or when suffering, or distress comes under his observation, regardless of its nature. In the goodness of his great big heart he is afraid that the sympathy and interest will not be felt, and that the care and skill will not be exercised in the examination and the diagnosis, and that the careful selection of therapeutics will not be as it should; and for these reasons the patient needlessly suffer or fill an untimely grave, and he is distressed. We see all around us doctors old before their time, and it is no exaggeration to say that it is only a question of a short time before many of the vigorous men in our ranks to-day will furnish additional illustrations of noble careers sacrificed on account of bad roads. For self-preservation we *must* do all we can for good roads. Sooner or later almost every one gets sick. Often very suddenly and very violently. The first thought is the doctor, and the first act is starting a message or a messenger for the doctor. The doctor starts as soon as practicable after receiving the message, and goes as fast as the condition of the road will admit; but the average condition of our roads requires twice, if not three times the length of time for him to reach his patient than would be taken up on good roads. What happens while this wearisome waste of time is going on? Ordinarily nothing much but waste of time, and much additional and unnecessary suffering for the patient. Occasionally, however, the result is more serious for the patient and the patient's family. In case of hemorrhage, eclampsia, pernicious malaria, and a number of other troubles, while the doctor is going over the road to the patient's house the patient has sometimes taken the road from the patient's house—that road back

over which none ever return. Almost all of those cases are amenable to treatment, provided it be properly applied in time. No man knows how soon some of these things may happen to himself or to some member of his family, and pale death arrive ahead of the doctor, while the doctor is making the very best time he can over bad roads. Then while a man has the privilege to oppose and vote against good roads he has no right to do so. How different the case in emergencies when the doctor arrives quickly! For illustration, take a case of pernicious malaria. The patient always dies from this malignant disease if help is not obtained in time, but always gets well if properly treated in time.

Another thing worth considering is that the great pecuniary advantage of good roads enables the doctor's patrons to pay him for his services, and this enables the doctor to render much better service.

The doctor who has to spend most of his time on bad roads has very little time to attend to his collections, and it is a well-known fact in the business world that if you neglect to look after your accounts even honest men will neglect to pay them, and the dishonest will not pay them. Under such conditions the doctor has neither the money to get the best new books and the best journals, nor the time to read them if he had. So in the long run the patient is the greatest sufferer. So let us have good roads so that the doctor will have time not only to read just a little, but time to collect what he makes, and get more books and journals, and to read a great deal more, qualifying himself much better and thus give his patients much better service. Then in the long run the patients will receive the greatest benefit. But this was not intended for a long paper, nor for an enumeration of all the benefits of good roads, not even all those of most importance to the doctor and the patient. We have too many other questions of greatest importance to discuss in our limited time. Let us all go into the campaign now on for good roads, and give the movement all the support we can. Let us talk good roads and encourage all others who do so to get everybody else to the same, to think the same, and then the people will act, and we will have good roads. The Press of the State, the strong lever of progress, is doing great work for good roads. Once the people come to think about it right and see the great advantage and value of good roads they are going to have them.

But there is one more reason to be given why we should have good roads, and it is placed last for the sake of emphasis. We have talked about self-preservation, but there is another for whose sake we should

exert ourselves to the utmost for good roads, the noblest and bravest of our noble women—the doctor's wife. God bless her! Very few physicians marry until after they begin the practice of medicine, and this good woman understands from the beginning that she is to be deprived of her husband's society, help, and protection almost all of the time. She knows that she will not and cannot interfere with her husband's going forth at all hours of the day and the night for the relief of suffering humanity. She knows beforehand that for her there must necessarily be many long, lonely hours both by day and by night, and that as her husband is to be almost always away, a very great responsibility rest with her alone in the proper management and bringing up of the family.

It is well known that a sufficient amount of rest and sleep is necessary for the preservation of health and beauty. The physician explains all this to his wife, and entertains her not to sit up and wait for him, as the time of his getting home at night is necessarily very uncertain. She agrees to all this very readily, but we all know that times without number when we come in late at night tired, hungry and cold, and sometimes very much discouraged there is a sweet face and a bright smile to welcome and cheer us, a good fire to warm us, and a warm supper to restore us. We cannot appreciate much of this, but we do appreciate it, and this part we cannot conceal, and for this we reason it is in vain that we remonstrate. So what can we do? Why let us have good roads, and then we can make our rounds and get home in time for supper, ordinarily. Then after supper we can sit down and talk and read with her, and she will be happier, and we will be better men and better physicians, and the diseases of our patients will puzzle us less, and more of them will get well, and they will all get well quicker, and even the doctor's life will be worth living.

Milk Idiosyncrasies in Children.

A great many children will not digest milk; some have milk temperatures, which are due to fermentative changes brought about by undigested milk. In hand fed children and those suffering from athrepsia (merasmus), we are dealing with subnormal digestive conditions. It is evident that such children require a different form of food than would ordinarily be given in health. This condition is one which is em-

†Louis Fisher, M. D., author's abstract of a Paper read at the section on "Diseases of Children" at its meeting held at Saratoga, June 10th, 1902.

phasized by the writer, but he directs attention to a series of observations made on children in whom breast milk was not tolerated. He also cites some instances in which cow's milk was not tolerated. When milk given it invariably produced gastric disturbances, such as colic, vomiting and fermentative conditions ending in diarrhœa. At times high fever resulted from the continuation of milk feeding. When the stomach was washed in order to relieve same, large, cheesy, sour smelling curds were removed. This was also the case when the colon was flushed with the aid of a soft, flexible, rubber catheter.

Such children were so constantly disturbed by pain from the fermentative changes brought about by milk that their sleep was disturbed. In such conditions where the food was not properly assimilated, loss of weight was invariably encountered. When milk was withdrawn, the symptoms abated.

Other forms of feeding such as meat soups, vegetable soups, cream soups (not made with milk) and made from vegetables and meat juices were well borne and gave no evidence of discomfort.

The author reports excellent results from the use of a malt soup, the formula of which is as follows:

Keller's Malt Soup.—Take of wheat flour 50.0 (about 2 ounces) to this add 11 ounces of milk. Soak the wheat thoroughly and rub it through a sieve or strainer.

Put into a second dish 20 ounces of water to which add 3 ounces of malt extract; dissolve the above at a temperature of about 120 F., and then add 10 cubic centimeters (about 2½ drams) of 11 per cent. potassium carbonate solution. Finally all of the above ingredients and boil.

This gives a food containing:

Albuminoids	2.0 per cent.
Fat	1.2 " "
Carbohydrates	12.1 " "

There are in this mixture:

Vegetable proteids	0.9
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The wheat flour is necessary, as otherwise the malt soup would have a diarrhoeal tendency. The alkali is added to neutralize the large amount of acid generated in sick children. Beidort emphasizes the importance of giving fat, rather than reducing its quantity in poorly nourished children,

and cites the assimilability of his cream mixture or of breast-milk in under-fed children, as proof of assertions. The author has used this malt soup most successfully in the treatment of athrepsia (marsmus) cases in which the children were simply starved.

This food was very well borne and gave no discomfort. The author has careful notes of cases with their weight chart and the condition of the stools, and advocates the use of this form of feeding as a temporary substitute when milk will not agree and as a permanent substitute for milk when disagreeable symptoms are constantly encountered.

The food must be prepared by a competent chemist or at some laboratory where accurate methods prevail and also where the strictest attention to details is enforced. The food was prepared for the author by the Walker Gordon Laboratory, of New York.

In order that we may not be mistaken as to the milk disagreeing with a certain case, the author impresses the fact that we should know the age of the milk, to be sure that it is fresh milk. The milk should be amphoteric or alkaline in its reaction; acid milks should not be fed. When milk disagrees it should be diluted and it is only after constant watching of all details that we should say with certainty that our little patient is one in which there is a milk idiosyncrasy.

Laceration of the Cervix a Cause of Abortion.

Rogers, R. W. Montreal Medical Journal, vol. xxxi, No. 4, p. 277, April, 1902.

The experience of the writer confirms him in the belief that lacerations of the cervix, particularly those which are of some depth, are a frequent cause of abortion. A primipara can usually give some cause for abortion, such as a misstep or a fall, but in those who have previously borne children, where there is a fissure extending as high as the internal os that will admit the tip of the index-finger, or the integrity of the lower uterine segments is lost, there is a predisposition to abortion.—*Medicine.*

Charlotte Medical Journal.

EDWARD C. REGISTER, M. D., Editor.

No. 36 SOUTH TRYON STREET. - - - -

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THE 49th ANNUAL MEETING OF THE NORTH CAROLINA MEDICAL SOCIETY.

The Wilmington meeting was a great success in many ways. The conveniences of meeting in a large hotel where every thing is under one roof is a great help to those who have much of the work to do. The sociability is increased in one building where everyone is thrown together at all times of the day.

The Attendance.

More than 200 members were present and quite a number of visitors. Asheville, 1899, still holds the record for attendance but Wilmington pushed her very close considering the fact that the meeting was held very late this year and that June is a very busy month with our doctors the attendance was fairly good. It would likely increase the attendance if our meetings were held either the first or second Tuesday in May each year. However, doctors are very much given to staying at home and if they are busy they can not leave and if they are idle they can't afford it.

The Order of Exercises.

The Society was given a very cordial welcome by Hon. A. M. Waddell and we all felt at home after his graceful address. The annual discussion was held on the evening of the first day and quite a number of speakers took part. Dr. Kent, the leader, chose a very commonplace subject but it was one that everybody had an idea about and the talks were very much enjoyed.

The morning of the second day was spent in the election of a new Board of Medical Examiners and strange to say the entire Board was elected on the first ballott. The number of candidates were surprisingly small and the matter was decided very much sooner than was expected. A cordial invitation was telegraphed the American Medical Association to meet in Asheville next year, but they decided to go to New Orleans. We feel sure that our delegate, Dr. Burroughs, did all he could to bring them to Asheville.

The Papers.

The quality of the papers read was above

the average, in fact they were all good. We enjoyed very much Dr. Davis' paper on the surgeon and his anatomy. So many surgeons have no anatomy to speak of, they cut and tie and drag out everything that is not attached to the spine and then begin to stimulate the patient. It is a bad arrangement that so few will stay over for the third day. Some of the very best papers of the whole meeting were read on the third day when there were hardly twenty in the hall. Dr. Kirby's paper on appendicitis was worth staying over to hear and it is too bad that it could not have been heard by all. None of the papers were long and the listeners were never bored with extracts and as a rule they were all well read.

The Discussions.

Most of the papers were well discussed after the ice was once broken. The first two papers were passed over before anyone got much of a chance but afterwards the discussions were full. There was a tendency among the members to discuss the discussion and on one or two occasions the paper itself was lost in the side issues and irrelevant things.

Some of our younger members are coming to the front as off-hand speakers and they will likely have much to do with the business of the society in the future.

Small-pox was one of the most discussable subjects on the program and some of the experiences related were very instructive as well as interesting. There is something about small pox that always makes a doctor want to talk.

The Chairmen.

The chairmen of the different sections deserve all praise and credit for the quantity and quality of the scientific part of the program. It takes a great deal of work and patience to get up papers for a meeting, but these men did their work well.

Every chairman was present except one and they all had good reports. Nearly all of this work is put upon the young men of the society and the fact that it is done so well indicates the enthusiasm of our new members.

It is most excellent training for our young members and it keeps the character of our scientific work thoroughly abreast of the times. Surgery has been the most favored section in the past but this year Medical Jurisprudence and State Medicine came up very near the top.

The Officers for 1903.

The new president is a well-known member of the Society. His face and voice

are familiar to those who have attended the last ten or fifteen meetings. Dr. A. W. Knox was elected first Vice-President for the Tarboro meeting in 1883.

The following year he was elected a member of the Board of Medical Examiners to serve six years.

Having filled these places with credit to himself and honor to the Society it is very natural that he should be chosen to fill the highest office in the gift of the profession of his state.

The Vice-Presidents Drs. Moore, Julian, McKenzie and Nicholson are young men of great promise and they are able to assist the president in all the duties of his high office.

Dr. J. Howell Way, the Secretary, is the right man in the right place. He is a regular born secretary and would rather tabulate statistics than attend a banquet. He can be counted on to do some aggressive work for the good of the Society.

Dr. Sikes, the new Treasurer, is as old as the hills and just as reliable. With no display he does a great deal of work in the very best way and always manages to keep the Society a few dollars to the good.

The President's Address.

It is to be regretted that the committee on the President's message did not get a chance to report until the meeting was ready to close. There was no time for discussion and so many of the points of the address will be lost. It would not be a bad idea to make the consideration of the President's address a special order for some definite time on the second day. Say 5 p. m. At this hour let the committee bring in their report and there will be plenty of time to consider their recommendations. Our presidents are more than merely presiding officers, they are our leaders in every good work for the Society and we should pay more attention to their words of counsel and advice.

The reorganization scheme was left in the hands of a committee with the Secretary Dr. Way, as chairman. This committee will bring in a report at the next meeting and we hope they will keep us in touch with the progress all around us.

The 1903 Meeting.

By a unanimous vote the society decided to go to Hot Springs, N. C., next year. Greensboro and Raleigh both sent invitations but they seemed rather indifferent about it and so the crowd voted for the hills.

It was really Raleigh's time as it had been just ten years since we met in the Capital, but she did not appear so warm for it as Hot Springs.

Hot Springs is in the extreme western portion of the state, some forty miles beyond Asheville and you can almost throw a rock into Tennessee from the hotel. But the hotel accommodations are great and the railroad facilities are all that could be desired. There will be no trouble in going or coming. The mountain scenery along the route is worth going across the continent to see. The American Medical Association will meet in New Orleans some time between May 1st and 15th and it is to be hoped that we can arrange for our meeting the week before. Let us have it before the busy season in June opens up for the doctors.

We had the ocean right at the front door this year and we will have the mountains in the backyard in 1903.

The Boat Ride Down the River.

The excursion given by the Wilmington doctors to the Society was very enjoyable. The Society left the beach in a body on a special train at 1:30 Thursday afternoon and was aboard the steamer "Wilmington" by 2:30, and after a short steam up the river she put straight out to sea. Refreshments were served aboard and music filled the air during the entire trip. The members who went home missed a great treat, one long to be remembered by those who took the ride.

The Board of Examiners.

The seven members of the old Board laid aside the arduous duties of their office on Wednesday night and turned over to their successors the responsibilities of their position.

One of the features of the breaking up of the old Board was the presentation of a very handsome cut-glass punch bowl and solid silver ladle to their Secretary, Dr. J. Howell Way, as a slight token of the Board's appreciation of his work and merit. The gift was perhaps more to Dr. Way as a man and it was intended to express esteem as well as admiration.

Dr. Way as Secretary of the Board has done a great work in helping the members to do their duty as examiners, and it was a very graceful way to show their appreciation of his services.

Illegal Practitioners.

It has been a great bother just how to get after these fellows who practice without legal sanction and various recommendations have been made. The best suggestion yet was brought out in the conjoint session with the State Board of Health, and it was to make it part of the work of the State Board of Health to look after these fellows. It seems so easy for the Board of Health to do their other work and it is done so well that

it does seem that this is the solution of the matter.

If there is a man practicing in your vicinity without a license report him to the Secretary of the Board of Health and he will bring the matter of prosecution to the attention of the solicitor.

The time to look after these shysters is when they first settle down, before they have a chance to get started in the work much.

The trouble is we wait until the man has gotten into a number of families, of people who are not able to judge of the qualifications of a physician and then he is hard to dislodge,

A very little official action at the very start might jar him loose whereas if we wait he can not be broken off by the strongest process of law.

Dr. O'Hagan's Picture.

One of the most touching exercises of the meeting was the presentation of a large, handsomely framed, oil portrait of Dr Chas. J. O'Hagan to the Society by a committee who had raised the funds by voluntary subscription. It was a spontaneous expression of esteem from a large number of members. Dr. R. H. Lewis made a beautiful presentation speech and Dr. G. G. Thomas on behalf of the Society made a touching talk of acceptance.

The portrait will be given by the Society to the state and be hung in the State Library at Raleigh.

AMERICAN MEDICAL ASSOCIATION.

The fifty-third annual meeting, was held at Saratoga Springs, New York, June 10 to 13, 1902.

The meeting was notable in several points. It was the first meeting held in the State in twenty years. It occurred when the prospect of the healing of the breach between the two factions in the profession in New York was quite favorable. It is hoped that the assembling of the Association in Saratoga will hasten that occurrence. To all appearance such will be the result. The village of Saratoga Springs by its prominence as a great Watering place with its fine hotels, accommodation without crowding, made it an ideal place for the assemblage or convention.

At this meeting a new form or method of conducting the business or legislative part of the transactions was inaugurated. The House of Delegates for the first time took charge of this part of the proceedings, leaving the Association and the Sections free to devote the time to Scientific work without interruption. A further consideration of the

re-organization plan that was put into motion one year ago was taken up and carried forward.

The meeting was called to order by the President, Dr. John A. Wyeth, of New York, at 11 a. m., in Convention Hall, Saratoga Springs, June 10, 1902. After prayer by Rev. T. F. Chambers, the chairman of the Committee of Arrangements, Dr. G. F. Comstock, of Saratoga Springs, made the report.

The President then introduced the Hon. S. F. Nixon, Speaker of the New York State Assembly, a man who has always been a friend to medical men and measures. He spoke of the work of the Association in its influence in placing American Colleges on a plain with those of the European Continent. He said that opportunities for advancement in medicine are as great now as in the past century.

State Senator, E. T. Brackett, in a happy manner extended a most cordial welcome to the Association. He paid high tribute to the profession and of its advancement during the past quarter of a century.

The President then made his address. In opening he referred to the death, since the last meeting of the Association, of Prof. Edward Mott More, who was a former President of the Association and one of the founders of the New York State Medical Association; a consistent and loyal friend of an organized Medical Profession.

President Wyeth spoke of the International Medical Congress which meets in Madrid, April 23 to 30, 1903. He was appointed by the Secretary of State as a delegate and requested to appoint five additional delegates from the American Medical Association. These persons were named and have received their certificate from the Department of State to the Congress. They are Dr. Nicholas Senn, of Illinois; Dr. Maurice H. Richardson, of Massachusetts; Dr. Geo. Crille, of Ohio; Dr. Richard Douglass, of Tennessee, and Dr. Edward B. Dench, of New York.

Dr. Wyeth discussed the new era in the history of the Association in the meeting under the changed form; of the new relations between the Association and the State and County Societies.

He recommended the propriety of selecting in each of the geographical subdivisions of the United States in which meetings are successively held, some suitable location which has been found to be well adapted to the work of the organization and to which we could return when the meeting is again held in that section of the country. He also discussed Vivisections so far as it is cared for by the committee to which that question has been entrusted: Smallpox as

it has existed and urges all to labor unceasingly to impress upon communities in which they reside the necessity and safety of the immunizing process of vaccination; The Medical Profession and what it should be; and the Code of Medical Ethics was considered, advising a revision or modification in some of its features.

In conclusion, the President asked the members to stand for more than the healing art; to teach our fellow-men how to avoid disaster.

The President in calling the House of Delegates to order spoke of the importance of this period in the history of the Association, which it is passing, due to the change of organization; that after fifty-three years of trial the original plan had not secured the concert of action in the entire profession as it was hoped, for this reason a plan was accepted one year ago from the committee on organization, and the testing of it was at this meeting.

Dr. Wyeth recommended the appointing of a committee on Sections and Section Work. And called the attention of the House of Delegates to the importance of considering the need of interstate comity or reciprocity. It was discussed also and recommended that the expense and management of the annual meetings be assumed by the House of Delegates, with the Secretary acting as agent, thus relieving the local profession of a burden as well as the need of commercial methods to meet the expenses.

He advised the continuance of the present committee on medical legislation. The establishing of a department of public health was to be one of the duties devolving upon the influence of the Association. He urged also the appointment of an officer who shall act as an organizer of the profession, a man especially fitted for the work; to visit States and territories in which Society work and medical organization are practically neglected.

The Secretary, Dr. Geo. H. Simmons, of Chicago, made his report and some of the points are as follows: Almost without exception the State and Territorial Societies through their officers have shown not only a willingness but an earnest desire to co-operate with the American Medical Association in its work of re-organization. Some State Societies, or the committees representing them, are at a loss how to arrange their constitutions and by-laws so as to conform to the principles recommended by the American Medical Association, and many members of these committees have written the Secretary asking if the Association could not suggest a form that could be adopted by all of the State Societies.

Dr. Wyeth during the past year appointed a committee to formulate a constitution and by-laws for State Societies, the original committee of reorganization, viz: J. N. McCormack, P. Maxwell Foshay and Geo. H. Simmon were appointed. A number of States have adopted this constitution and by-laws with slight modifications, others exactly as submitted by the committee, and all of the States heard from have appointed committees on organization, so that by next year we expect to see most of the States fall in line.

The report of the Board of Trustees for the fiscal year ending Dec. 31, 1901, was then made: The financial condition of the Association is in a gratifying condition. The circulation of the Journal of the Association has increased during the year from 17,446 to 22,049 and the cost of publication has decreased from \$5.18 to \$4.81 per year. During the year 14 Chicago City School bonds at par value \$1,000 each were purchased. These with the previous purchase of Government bonds gives an interest-bearing investment of \$24,000.

A property has been purchased in Chicago by the Board of Trustees for the permanent home of the Journal and headquarters of the American Medical Association.

Upon motion of McCormack (Kentucky) the President appointed a business committee and named McCormack, Foshay, Murray, Moyer and Fergusson. Their duty will be to sit during the session of the House of Delegates and consider all resolutions coming before the House before the final action by that body.

Prof. O. Haab, of Zurich, Switzerland, who had been elected to honorary membership in the Association, was introduced to the House of Delegates and thanked the members for the honor conferred upon him.

E. Elliot Harris, (New York) offered a resolution that a committee be appointed for revision of the Code of Medical Ethics. The following committee was named: E. Elliot Harris, New York; Wm. H. Welsh, of Baltimore; Nicholas Senn, of Chicago; T. J. Happell, of Tennessee; Jos. D. Bryant, of New York, and J. N. McCormack, of Kentucky.

H. L. E. Johnson, of Washington, D. C., made the report of the National Committee on Legislation. He spoke of the increased respect of National and State legislators for the newly-organized Association. The conduct of Congress toward Surgeon General Sternburg was criticised.

The report of the committee on Organization was made by Dr. P. Maxwell Foshay (Ohio) who presented its suggested form of constitution and by-laws for State Societies in affiliation with the Association.

The report was adopted and the committee was continued and thanked for its work and asked to continue its work in bringing forward a form of constitution and by-laws for County Medical Societies.

Victor C. Vaughan (Mich.) offered a resolution calling attention to the long service of Surgeon-General Sternburg, of the U. S. Army and asked the Association to petition Congress to take appropriate action that his work may receive the official recognition which it deserves. The following officers were chosen for the ensuing year: President, Frank Billings, of Chicago; first Vice-President, J. A. Witherspoon, of Nashville; second vice-president, G. F. Comstock, of Saratoga; third vice-president, C. R. Holmes, of Cincinnati; fourth vice-president, James H. Dunn, of Minneapolis. Board of Trustees, E. E. Montgomery, Philadelphia; H. L. E. Johnson, Washington; A. L. Wright, Carroll, Iowa. Henry P. Newman was elected Treasurer and George H. Simmons Secretary.

The work of the various Sections was all of a high order. A number of notable papers were read, among which we mention, "The relation of Medical Science to Commerce," by Dr. Frank Billings of Chicago. Two papers in the Section of Surgery and Anatomy; "The Surgery of Tuberculous Cavities of the Lung," by De Forrest Willard, Philadelphia, and "A contribution to the Surgery of the Lung," as based upon original observation," by Dr. Horace J. Whitacre, of Cincinnati, Ohio; a timely paper by Dr. S. A. Knopf, of New York, State and Municipal Sanitaria—The Present Aspect of the Tuberculous Problem in the United States," was made in the Section on Hygiene and Sanitary Science.

The officers elected for the ensuing year were installed and the Association adjourned to meet in New Orleans in 1903.

THE MISSISSIPPI MEDICAL EXAMINING BOARD.

The record of the work done by this Board at the last session is rather interesting. It shows what the South is requiring of the young physician before he can begin the practice of medicine.

Out of one hundred and fifty-three persons examined, only seventy-seven passed, seventy-six failed, nearly fifty per cent. In North Carolina we only examine graduated men and of these, as a rule, twenty-five per cent. fail to receive their license.

Minutes of the Wilmington Meeting.

The Forty-Ninth Annual Meeting of the Medical Society of the State of North Carolina was called to order at twelve o'clock A. M., by Dr. Frank H. Russell, Chairman of the Committee on Arrangements.

The Rev. A. D. McClure opened the session with prayer.

The Hon. A. M. Waddell delivered the address of welcome, as follows:

Mr. President and Gentlemen of the Medical Society of the State of North Carolina:

I am very happy to have been assigned to the pleasant duty of welcoming this assembly of physicians and surgeons of North Carolina to the hospitalities of our people. Like other folks, each of us is always glad when the doctor comes and therefore we are many times more glad to have such a large assembly of doctors here, but we wish you to understand that the usual order is to be reversed, and that we are going to minister to you, instead of being ministered to by you, and we hope that the prescriptions which we give you will be at least more palatable than the ones we are in the habit of receiving at your hands. They certainly will be given in larger quantities and more often repeated, provided the recipient will follow the directions—and example—of those who have charge of them.

No intelligent man who has lived during the last fifty years needs to be told that medicine is a progressive science; he only has to remember what it was in his youth and recall what it is now. He only has to recall the doctor's "stuff" that was administered when he was a boy and contrast it with the contents of a first class modern drug store, and the old fashioned surgical appliances with the equipment of an up-to-date hospital, and the former attendance, however kind and affectionate it might have been, with the service now rendered by that newly developed wonder and comfort, the trained nurse. I never see one of those white-capped, white robed ministers of humanity and civilization without recalling the witticism of Mr. Dooly, with which perhaps most of you are familiar. Discussing the doctor and Christian Scientists, he said:

"If the Christian Scientists had a little more science, and the doctors had a little more Christianity, it wouldn't make any difference what you called it—providin' you had a good nurse."

Now, gentlemen, the average layman has no just conception of the marvellous advancement of your science during the last century. As I said, he knows in a

general way that there has been a great improvement in it, but how this improvement was accomplished—the history of its development, he knows nothing whatever about, and cares nothing about. He sees the announcement of some remarkable surgical operation, and he accepts it as a matter of course, without giving any other thought to it than he gives to the automobile in which he rides or the electric lights on the streets. I say he has no just conception of the phenomenal advance of your profession—and I presume you are glad that he has not. It would not be well for all to know everything that the doctor know—and I think you yourselves would so prefer.

I am certainly not here for the purpose of giving advice. I am here for the purpose of welcoming you, as I do most heartily. It has been my fortune to address two graduating classes of medical colleges, once in Richmond and once in Charleston, and we had a heap of fun on those occasions, but you will not have any from me to-day.

There is one suggestion, however, which in all seriousness I would like to make to this body, which I can make with propriety, and that is this: Wouldn't it be wise for this body, as a body, to memorialize the legislature to repeal that provision of our law which requires all witnesses in court to kiss the book, excepting in cases where religious or conscientious scruples prevent them, in which case the witnesses are allowed to hold up their right hand? I am looking at it in a sanitary point of view. It is a dirty, unsanitary, uncleanly and really unnecessary method of swearing. Of course a man who would be bound by oath would be just as much bound by it if he placed his hand on the book, or if he held up his hand. Now, results have been fatal from the diseases contracted from kissing the book. One such case actually is reported, as I have read myself in an English paper where a policeman contracted a fatal throat disease from it. I believe every intelligent physician will recognize the fact that it is always possibly dangerous to indulge in this practice. If you could see the creatures that I daily see kiss the book, you wouldn't want to touch it with a ten foot pole, much less kiss it.

Claiming as I do to be a Christian, I certainly have as much reverence for God's Word as contained in the Holy Scriptures as others, but I believe it is absolutely unnecessary to go through that form of kissing it, when placing the hand upon it will bind the conscience quite as much as kissing it, or going through any other form, and I ask the medical profession if they wouldn't consider the propriety of acting

upon this suggestion, because I think they could, as a body of physicians and surgeons of North Carolina, do more to accomplish the desired results than any others, and I think that by doing so, they would render an important service to humanity.

I wouldn't offend your good sense or violate the proprieties of this occasion by entering upon an encomium of your profession or by firing off a set speech at you. I simply repeat the words that I used at the beginning, that I am very happy to be here as the representative of my people to extend a most hearty and cordial welcome to you to the hospitalities of this community and to express the hope that your deliberations here may be entirely harmonious and may result in the advancement of the interest of the high and noble profession to which you belong.

Dr. T. S. McMullan, of Hertford, made the following response.

Mr. President, ladies and gentlemen: It is with great pleasure, and yet with some regret, that I arise to thank you, in behalf of the Medical Society of North Carolina, for your generous welcome. The pleasure comes because we know the depth and breadth of your hospitality, your far famed kindness to the stranger that is within your gates; a hospitality that was inherited from your sires, that took root when your beautiful city was a few log huts on the banks of the Cape Fear and which has broadened and spread like the leaves of a green bay tree. My regret is that I stand here, in the place of another member of this Society to whom had been assigned this delightful privilege and who would have voiced its sentiments in words far more pleasing than any of mine. The scholarly and beautiful words with which we have been greeted to-day, and the eloquent expressions that have come to us, impress us that men everywhere always take interest in our work and progress. That in us they seek, and not in vain, safety for themselves, wives and little ones; that to us they look, and us they depend for freedom from pains and perils and sufferings and cling to us through earthly ills, until they "pass over the river and rest under the shade of the trees."

The time and occasion is not one, Mr. President, to indulge in fulsome words. Our only function at this hour is to thank the profession and the people of Wilmington for the magnificence of their welcome; for their attention to every want; for their observance of everything that we might need; for the courteous proffer of every association and for their thoughtfulness in having us deliberate at this delightful sum-

mer home, surrounded by every comfort, on the sands of the mighty Atlantic, fanned by these glorious breezes from off its bosom, making delightful our physical comfort and within the roar of these whitecapped and awful billow, which lull us to sleep by night and which by day are as an inspiration from the almighty God himself.

So much of good has come out of Wilmington, Mr. President, so many noble men and women have lived and worked and lie dead under the green oak leaves, it is proper that from time to time public assemblies, such as this, should recall the days gone by. I would like to tell you, did time permit, of how in the days of long ago, the sons and daughters of Wilmington, in the broad daylight, with no disguises, save the changeful lines of righteous wrath, resisted the British tyranny and hurled defiance at King George's throne; of how Cornelius Harnett, rugged old patriot that he was, great of heart and wisdom, and touched with the fire of liberty, of how this great Carolinian gathered together the brave and manly sons of the Cape Fear family and chased the Red Coats from his native land. He wished no kingly pardon—a glorious man he was. Slave to no sect, he took no private road, but looked through Nature up to Nature's God. Of their strength of heart and of their childrens courage who followed the Stars and Bars. Of their forbearance in the dark days of their long suffering in days, patiently enduring till forbearance ceased to be a virtue, and of how, under the leadership of a gallant veteran and a noble son, they took, in defense of the sanctity of their homes and their firesides, thinking naught but of the pure crimson blood of their saxon sires and the safety of their loved ones, that stand, which has given to North Carolina an era of peace and wisdom and happiness which will endure forever. But, Mr. President, I will not further trespass. The most eloquent thought that can be offered is the simple statement from us to you that we knew what we would get when we came among you. We have partaken before of your liberal cheer and before have been delighted with the smiles of your charming and beautiful women. Ten years has it been since we met with you and I speak for us all when I say to you that the remembrance of that visit has been as the fragrance of a full blown rose.

Some of us that were with you have gone to their long home. Let us remember them and hope for that them

"There was no moaning of the bar
When they put out to sea."

We, that are here, are again glad to visit

you and whether it be our lot ever again to meet you under your own vine and fig tree, let me answer you that our memories will always be charged with recollections of your kindness, of your warm greetings, of the heartiness of your welcome, of the beautiful diction of your learned and far famed townsmen and not less than these, of the grace and beauty and liveliness of the fair daughters of the city by the sea.

After the calling of the roll the President delivered his address.

The following Committees were appointed:

Credential.—Drs. Russell, Fletcher, Cobb, Hays and Moore.

Finance.—Drs. W. H. Lilly, Poole, Parrott, Laughinghouse and McKenzie.

The following motion was made by Dr. G. G. Thomas:

That the able address of the President be referred to a committee of three, who will digest its valuable suggestions and report to this society thereon—at this meeting, of course. Which was seconded and carried.

Dr. Thomas:—I would like to say to the members of the Medical Society that the Carolina Yacht Club beg leave to extent to them the courtesy of their Club House, just below the hotel, and beg that you will make yourselves at home in their hammocks or rocking-chairs, and if you have a girl, find a cozy corner. They will treat you with ice water and a bathing suit.

Dr. Lewis:—I move that our Society pass a resolution cordially inviting the American Medical Association to meet in our State at the City of Asheville at their next meeting.

Dr. Way suggested the following amendment: That the Secretary of this body be authorized to transmit by telegram this invitation to the Secretary of the American Medical Association now in session.

Dr. Lewis.—I accept the amendment.

By the President:—It is moved that the North Carolina Medical Society invite the American Medical Association to meet in the City of Asheville in this State, and that the Secretary of this Society be instructed to transmit this invitation by wire to the American Medical Association now in session at Saratoga Springs.

Carried.

Section on Practice of Medicine was called up and the chairman read his report on "Uric acid Excess." Dr. C. A. Julian then read a paper on "So called Dyspepsia and its Treatment."

Society then adjourned.

Called to order at 3:30 P. M.

Dr. Young announced the following committee on president's address:

G. G. Thomas, W. H. Whitehead and B. K. Hays.

The finance committee then made the following report which was adopted as read by Dr. W. H. Lilly.

Reports of Committee on Finance.

Your committee on finance beg leave to report that they have examined the books and accounts of the treasurer and report as follows:

To balance on hand May 2, 1901. \$136.78.

June 9, 1902, amount collected from members

\$136.78

951.50

1088.28

Expenses.

June 10 Pd G. W. Pressly, Sec. \$125.00

" " " G. T. Sikes, Treas. 100.00

" " " Sec. Incidental 106 19

" " " Stenographer 25.00

" " " for typewriter 2.25

" " " Stationary, printing, etc. 16.49

" " " Sec. am't advanced on

Transactions, 71.25

" " " for printing transac-

tions, 300.00

746.18

" " " To balance on hand, 342.10

We recommend the annual assessment of \$2.00 per capita; that the salary of the Sec. be \$125.00 and that of the Treasurer be 100.00.

We recommend that a stenographer be employed at a salary not to exceed \$25.00

The section on Anatomy and Surgery was called and Dr. James M. Parrott read a paper on "The Surgical Treatment of Chronic Ulcers," which was discussed by Dr. Bellamy.

Dr. H. A. Royster read a paper on the "Radical Cure of Hernia," which was discussed by Drs. Rodman, Flippin, Bass, Crowell, Parrott and Smoot.

Dr. Gwilym G. Davis of Philadelphia then read a paper on "The Knowledge of Anatomy from a Practical Standpoint," which was discussed by Drs. Royster, Galloway, Hays, Bass and Knox.

Dr. Pendleton then read a paper on several interesting cases in Surgery which was discussed by Dr. Crowell.

Dr. P. J. Macon read a paper on "The Management of Small-pox Outbreak." Discussed by Drs. Sikes, Pendleton, Lee, Lewis, Glenn, Kent, Thomas and Galloway.

Dr. G. G. Thomas offered an amendment to the constitution in regard to new members, but as there was objection it was withdrawn.

Invitations were received from Greens-

boro, Raleigh, and Hot Springs asking the Society to meet there next year.

Society adjourned until 8:30 P. M.

Society called to order at 8:30 P. M.

The annual discussion was opened by Dr. A. A. Kent of Lenoir on the "Treatment of Typhoid Fever."

Drs. Smoot, Sikes, Rodman, Highsmith, Bass, Brown, Halsey, Cheatham, Knight, Nicholson, Macon, Whittington, and Flippin took part in the discussion which was very free and full.

Society then adjourned until 9:30 to-morrow morning.

Meeting called to order at 9:30 A. M.

Dr. S. E. Koonce read a paper on "Should the State Extend her Public Charities." Discussed by Dr. Smoot.

Dr. T. S. McMullan offered the following resolution.

Whereas, it is the sense of this Society that the present method of administering the oath by kissing the book in District Courts is attended by some danger, be it

Resolved, that this society requests the next General Assembly of North Carolina to amend the law so as to provide a method not attended by any such risk.

Moved that this resolution be referred to Committee on Legislation.

Carried.

Dr. W. P. Ivey then read a paper on "The Mattison Method in Morphinism" which was discussed by Drs. Anderson, Whittington and Knight.

The Board of Medical Examiners then made their report through the secretary, Dr. Way. The report was adopted.

Dr. J. L. Nicholson, as chairman of the section on Medical Jurisprudence and State Medicine, made his report which was discussed by Drs. Duffy and Parrott.

The Obituary committee through its chairman, Dr. E. G. Moore, made the following report:

Mr. President: Your committee appointed on obituary, are glad to report the death of so few of the Society's membership during the year which has passed.

While the loss has been few in numbers, yet notable characters, most excellent representative of the old school which is rapidly passing away, and shining examples of that age and system, to which we all bow in humble reverence and profoundest respect, have quitted these scenes of earthly toil and joined that silent majority beyond the tomb. We mourn our loss, we drop upon their graves the flower of love, and shed upon their tombs the tear of sympathy.

Their lives were filled with deeds of noble charity, their labors were a blessing to humanity and a benediction for good.

Hence they lived not in vain. Like a shock of corn fully ripe they have been gathered to their fathers. Full of years and honor they have passed to their reward and left us the rich heritage of lives devoted to their profession and to humanity.

In that resurrection morn may they receive the plaudit "well done thou good and faithful servants."

Love be to their memories and peace be to their ashes.

In Memoriam.

Joseph H. Baker, M. D., Tarboro.

Dr. Baker, the son of Dr. Wm. S. Baker, was born in Edgecombe county on Dec., 25, 1831, and died at his home in Tarboro on February 12, 1902. He was prepared to enter the University of North Carolina by teachers in Tarboro. He remained two or three years at the University, where he was very popular and highly esteemed by all the students, who knew him.

After leaving the University he began the study of medicine, and after attending two courses of lectures in the Medical Department of the University of Pennsylvania he graduated in the spring of 1854.

Immediately after graduating he settled in Tarboro and began the practice of medicine, succeeding Dr. Joseph Lawrence, an old and honored physician of that place. He has ever since, up to his last illness, been actively engaged in the practice of his profession.

He had a large and extensive practice, including many notable cases of surgery and obstetrics.

He was the first surgeon in this country to diagnose and advocate an operation upon, if not the removal of the kidney. He took his patient to some distinguished surgeons in New York and Philadelphia and each refused to operate and the patient died after very great suffering.

In April, 1861, at the beginning of the late Confederate war, he volunteered in the Edgecombe Guards, afterwards Company A. First North Carolina Regiment of volunteers, (the Bethel regiment.)

When the regiment was organized he was appointed First Assistant Surgeon of the regiment and commissioned on the 16th day of May, 1861.

The late Dr. J. G. Hardy, of Asheville, was appointed Second Assistant Surgeon and commissioned on the same date. Dr. P. E. Hines, of Craven county, was appointed and commissioned Surgeon of the regiment on the same date. This regiment left Raleigh on May 21, and after two days in Richmond, Va., was sent to Yorktown. In a few days after arrival there, Surgeon Hines was detached from the regiment and

assigned to duty in charge of General Hospital. Dr. Baker then became the Surgeon in charge of the regiment with Dr. Hardy assistant. They discharged their duty faithfully, skillfully and kindly. He returned home when the regiment was disbanded in November, 1861, upon the expiration of their time of enlistment, Dr. Baker suffered very much in health while on duty below Yorktown, and it took him years to recover. There was no truer Confederate soldier than Dr. Baker. He was a member of the Medical Society of North Carolina and was elected vice-president of the society twice.

He held many offices of trust and honor. He was president of the County Board of Health. He had served as alderman and was twice elected mayor of his town. He was elected a member of the State Legislature in 1866-'67, and in 1868 he was elected under the reconstruction acts a delegate to the convention to form a constitution for the State.

Soon after his majority he joined the order of Odd Fellows. He was elected to various offices in the subordinate and Grand Lodge and in 1870 was elected Grand Master of the Grand Lodge in North Carolina and afterwards Representative to the Grand Lodge of the United States.

He has held the offices of director and vice-president of Banking and Insurance, of Building and Loan, and Agriculture and Mechanical Associations. He was a member of the American Legion of Honor.

The various position of honor which have been conferred upon Dr. Baker serves to show the esteem in which he was held by those who knew him best.

He had a kind, affectionate, loving and charitable heart: a genial, attractive, kindly disposition, which drew people to him and made them like and respect him.

He was a very able and successful physician and business man, doing good and being useful to his fellow men during all the days of his life.

Dr. Baker had been twice married: first to Miss Susan A., daughter of Wm. Foxhall by whom he has four sons living: second time to Miss Ida Manly, daughter of Governor Charles Manly, of Raleigh, from which marriage he had a daughter and a son. He was a devoted, loving husband and father.

One who knew him all his life says he "never heard him indulge in profanity, nor has anyone been found who has ever heard him use a profane or blasphemous word or epithet."

He was laid to rest from Calvary church, in its beautiful cemetery on Thursday,

February the 13th, where he will ever rest in peace.

In Memoriam.

Dr. J. M. Hadley, LaGrange, N. C.

Died at La Grange, North Carolina, on the 13th of December, 1901, Dr. Jacob M. Hadley, in the 67th year of his age, after a short illness of pneumonia. Thus has passed away a distinguished physician and one of the most useful and consistent laymen of the Methodist Protestant Church in North Carolina. Of his walk in life it may be said that he was a rare example of modest worth, a skillful physician, performing the duties of his calling with sympathy and kindness, largely ministering to the afflicted in charity, and we trust, laying up abundantly in heaven those treasures which are to be more esteemed than gold and precious stones. The life of a practitioner with an extensive country practice is necessarily laborious, but Dr. Hadley never refused an appeal when he could alleviate suffering, no matter how inclement the weather, how tedious the journey, nor how precarious the compensation. Nor amid the multitude of his cases did he ever forget his home duties or his religious obligations, but found a delight in performing them to the best of his ability. Much interested in church work, he procured the erection of the M. P. Church building at La Grange, and contributed with great liberality to its support. He was influential in all that concerned it, and, although at great inconvenience, he would, when practicable, interrupt his daily work to attend its General and annual Conferences. He attended the General Conference at Adrian, Mich., in 1888, and in 1900 he attended the General Conference at Atlantic City. In the annual conferences for many a year he represented La Grange Circuit, and it was just after his return from the conference at Henderson that he fell a victim to disease from exposure in inclement weather.

Not merely have the people of La Grange and vicinity mourned his loss, but the sacrifices of his valuable life is widely deplored.

In the field of his practice he was unusually esteemed and beloved, and the remembrance of this kindly and sympathetic physician will long remain among the people of Lenoir county to whom he ministered.

Dr. Hadley was of Quaker extraction. His great grandfather, Joshua Hadley, was a Quaker, who came from South Hadley, Mass., and settled in Chatham county, N. C., before the Revolutionary war. His grandfather, Jacob Hadley, lived at Had-

ley's Mills, in Chatham county, and was a man of influence, being a prominent farmer and large mill owner. His father, William Penn Hadley, who was born in 1810, like his father and grandfather, carried on extensive milling operation. During his long life, extending through more than four score years, he exerted a leading influence in his community, and was esteemed for his unswerving probity and high intelligence. He was blessed with ten children, worthily trained in virtue and excellence. Among these was Dr. Jacob M. Hadley, who, born on November 30, 1835, was educated at New Garden and Trinity College, and then taught school and studied medicine, graduating at the University of Pennsylvania in 1860. In the fall of that year he married Miss Elizabeth E. Kirkpatrick, of Orange county, and made for himself a home in Craven county, where he began to practice his profession; but the war soon came on, and, with patriotic ardor, he, together with three of his brothers, although of Quaker stock, promptly enlisted in the army raised in his native State. He served in a regiment commanded by Col. Clark for the defence of Newbern, and upon the fall of that city, he was appointed assistant surgeon, and was assigned to the hospitals at Raleigh with surgeons Bryan and Haywood.

In the autumn of 1862 he was appointed surgeon of the Fourth North Carolina troops, and after that shared the fortunes of that heroic regiment. On the retirement from Gettysburg he was left in charge of the wounded confederates at Martinsburg, where, upon the withdrawal of the Southern troops, he and the wounded in his charge fell into the hands of the Federal forces. But he had given such careful attention to some Federal wounded that he was not only not interfered with, but the Federal authorities secured for him and the men he was attending excellent treatment. After three months' service within the Federal lines, during which time he gained the esteem and good will of the Federal commander and of the medical officers of the Federal forces, he was paroled and sent through the lines, and soon returned to his regiment. He was subsequently with the Fourth North Carolina Regiment on the bloody fields of the Wilderness and Spottsylvania, and through the protracted siege of Petersburg, at the battle of Hotchis Run and Farmville, and finally at Appomattox he was receiving wounded men as the last guns of the war were being fired. While on the field performing his duties he was often in deadly peril, but fortunately escaped with but a single slight wound. In

1867 he moved to La Grange and began his life work there as the leading physician of that vicinity and soon acquired an influence that grew with the passage of years, and for a quarter of a century he was the first citizen in influence and usefulness in that community. He was president of the medical society of his county, and his professional brethren throughout the State manifested their regard for him by selecting him as one of the representatives in the American Medical Association at the meeting at Washington City in May, 1891.

Dr. Hadley has always been indefatigable in good works, and sought to promote them not only through the church and in private but as a Mason, as an Odd Fellow, and as a member of the Knights of Honor and Patrons of Husbandry. Having lost his wife some years before, in April 28, 1897, he married Miss Eliza Josephine Wingfield, of Portsmouth, Va., a daughter of Major W. C. Wingfield and a niece of Bishop Wingfield of California, and this estimable lady and their little daughter Mary and Mr. George B. W. Hadley, a son by his first wife, survive him. S.A.A.

Dr. R. W. Thomas, Thomasville, N. C.

We have been unable to get the data and facts relative to the life work and death of Dr. Thomas. We are told that he reached the mature age of 84 years and until two years prior to his death was an active practitioner at Thomasville, N. C.

He was a successful practitioner and enjoyed the esteem and confidence of his community in which he spent a long life of toil and usefulness. He died near the place of his birth, and left a host of relatives and friends to mourn his death.

E. G. Moore
J. M. Manning } Committee.
J. A. Burroughs }

The Society then went into the election of a new Board of Medical Examiners for six years.

The following members were nominated: Drs. W. T. Pate, James M. Parrott, Geo. W. Pressly, A. A. Kent, M. H. Fletcher, C. M. Poole, B. K. Hays, W. W. McKenzie, C. O'H. Laughinghouse, F. H. Russell, J. T. J. Battle and W. H. Harrell. After the first ballot the President announced that the following members were elected:

Drs. F. H. Russell, M. H. Fletcher, J. M. Parrott, C. O'H. Laughinghouse, A. A. Kent, J. T. J. Battle, and G. W. Pressly.

The Society then adjourned until 3:30 p. m.

Society called to order at 3:30 p. m.

The conjoint session was then held with

the State Board of Health. Dr. Geo. G. Thomas, of Wilmington, presiding.

The President made his address after which the Secretary made his report.

Dr. Walton offered the following resolution:

Resolved, that it is the opinion of this Conjoint Session of the Board of Health and Medical Society of North Carolina that the best interest of the State will be served by the appropriation by the General Assembly of a sum of money sufficient to conduct the bacteriological work now being done by the Department of Agriculture in Raleigh for the Board of Health.

Carried.

Dr. Tait Butler, the State Veterinarian, was introduced and made some remarks on bovine tuberculosis. After some general discussion of the subject the Conjoint Session adjourned.

The Society was called to order by the President and Dr. Chas. Duffy of Newberne, read a paper on "Inebriety The necessity of legal adjudication and restraints of inebriates."

Discussed by Drs. Murphy and Lewis.

Dr. Galloway introduced Dr. M. M. Stapler, of Macon, Ga., who read a paper on "Methods of treating deaf mutes" and gave a demonstration of his apparatus on several patients.

Discussed by Drs. Lewis and Galloway.

The Society then went into the election of officers for 1903. The following officers were elected:

President, A. W. Knox, Raleigh; Vice Presidents, E. G. Moore, Elm City; C. A. Julian, Thomasville; W. W. McKenzie, Salisbury; J. L. Nicholson, Richlands. Secretary, J. Howell Way, Waynesville. Treasurer, G. T. Sikes, Grissom.

The place of meeting was then considered. Raleigh, Greensboro, and Hot Springs, N. C., were put in nomination. Out of 56 votes, Greensboro received 9, Raleigh 14, and Hot Springs 33. Hot Springs by a unanimous vote was then selected as the place of meeting in 1903.

The President announced the following committee on nominations:

W. W. McKenzie, D. J. Hill, W. H. H. Cobb, W. P. Ivey, and J. C. Walton.

Dr. Geo. G. Thomas then read a paper on "Relief Departments in Railway Surgery," which was discussed by Dr. Walton.

Motion to adjourn.

Dr. Thomas: Before adjournment, I would like to have about five minutes. You have a very modest member of this Society, Dr. George F. Lucas, who asks me to present this book to the Society, which he found among the papers of Dr. S. S. Satchwell. It consists in the records of the Medi-

cal Societies of North Carolina, especially in the year 1850 and the meeting of 1851, both of which meetings were held in the city of Raleigh.

I notice in 1850 the Society offered the following premiums for the culture of the following medicinal articles in this State:

For the largest quantity, not less than 10 lbs. of Fox Glove, \$10; for the largest quantity, not less than 5 lbs. of Opium, \$25; (to be exhibited at the next meeting of the Society) For the largest quantity, not less than 10 lbs. of Rhubarb (exhibited to the Society) in gold \$30; for the largest quantity of Castor Oil, not less than 5 gallons, \$10, etc.

There is one other thing I want to read—in 1851 the Society met in Raleigh—they can't complain; they have had it plenty of times. Dr. Jones and Dr. — read the report of the District of Orange, and it seems from the report that there had been a great deal of Typhoid Fever in Orange County.

Dr. Williamson said he was desirous to know something about the treatment of typhoid fever. The epidemic alluded to in the report, that prevailed in Orange in 1816, he remembered very well, for he was at school at that time in Orange, and the fatality was immense, so much so, that in one family all died, and the neighbors burned the house. He was glad to see from the report that at as early a day as 1816 the incident was narrated of the old lady refusing to let her family take medicine, but threw down a bushel of ice, and told them to cool their bowels, was the best treatment that was adopted. As the result proved, all the family recovered.

I present this book in the name of Dr. George F. Lucas, a nephew of Dr. Satchwell.

It is moved that the thanks of the Society be returned to Dr. Lucas for the book, and that it be accepted with thanks.

According to the Constitution, the following members were elected Honorary Fellows: Dr. W. I. Royster, Raleigh; Dr. G. G. Thomas, Wilmington; Dr. Francis Duffy, Newbern.

The Society then adjourned until 8:30 p. m.

Meeting called to order at 8:30 p. m. by the President, and he announced that: The Committee charged with the duty of having the picture of Dr. O'Hagan made have completed their labors, and to-night that picture will be presented to the Society by the Committee through Dr. Richard H. Lewis.

Dr. Lewis said:

Mr. President and fellow-members of the Society, Ladies and gentlemen:—I feel

greatly honored at having been selected by our President to serve as a substitute for the eloquent Picot who was to have made on the part of the subscribers the presentation to the Society of the portrait you see before you. While I feel my inability to meet the requirements of the occasion, it is a duty from which I could not turn away. My birth-place having been only eight miles from his home, his friendship, descending from my father and my older brother, was my treasured possession literally from my cradle until he passed away. This is, therefore, a grateful task. I would that I could perform it more acceptably. Dr. O'Hagan was a man of strikingly handsome and distinguished appearance, of strong and vigorous intellect, adorned with a scintillating wit and genial humor. This was highly developed by a thorough education finished at the University of Dublin. He was familiar with the classics of Ancient Greek and Rome, and of our own language. With his silvery voice, this combination of native gifts and acquired accomplishments made him a forceful, attractive and graceful public speaker. As a conversationalist, he was simply charming. We have not forgotten how we were wont to hang upon his words. But while these qualities excited our enthusiastic admiration, it was not for them we loved him most. It was for his warm and generous heart, which secured for him our unflinching affection. He was ever the friend of the weak and oppressed. It was the delight of his life to administer both to the sick and the needy. The impression that Dr. O'Hagan has left upon us is shown in part by this gift, and I now, therefore, present this picture of him to the Society of which he was for so many years the leading member and brightest ornament, and which in life he loved and served so well.

Dr. Thomas on behalf of the Society said:

Fellow members of the North Carolina Medical Society—Ladies and Gentlemen, and President:

Who has not known the delight and refreshment of a mighty tree which furnishes a retreat to the weary traveller worn with the sun? Who in moments of sorrow or fatigue has not dreamed of the shadow of a great rock in a weary land? This man whose memory is still a sweet savor to us was a sympathizing friend, a loving brother, an earnest helper to all whose appeals reached him. His devotion to right knew no bounds, and he espoused the cause of all those whose cause aroused the attention of his great mind and heart. He was the sweet refreshment of the mighty tree—the shadow of the great rock. It is meet there-

fore that we accept this pictured representative of the dead—and that we recall the days he spent among us—aspiring to the heights which he found and living up to the example his life has left us,

This Society receives this as the trustee of those whose affection for Dr. O'Hagan led them to make this offering in his memory and will place it at a fitting season among those whom this State honors in its library at its Capitol city, and there it will find fitting company.

This Society will not forget Charles James O'Hagan, our great Commoner, nor fail to cherish with becoming pride this tribute to his memory.

Dr. Rodman.—As Treasurer of the O'Hagan Memorial Fund, I would like to make a few remarks.

The amount received by the O'Hagan Memorial fund	\$148.40
Amount expended for the painting of the picture	100.00
For taking photographs by L. J. Pepo	20.00
For frame	\$19.50
Making a total of	\$139.50

Leaving a balance due to the credit of the O'Hagan Memorial Fund of \$8.98—and now, sir, I would like to have instructions as to how the amount on hand is to be expended.

By the President.—Inasmuch as this fund was contributed by a committee, not by the Society, I don't know how to advise.

Dr. Thomas.—This picture is to be presented, as I had the pleasure to remark just now, to the State to be placed in its Library at Raleigh.

As one of the donors of that fund, I take the liberty of suggesting that this balance and such other funds as may be necessary be put in the hands of the committee that has it in charge to defray the expenses to present the picture of our beloved dead to the State at such a time as the committee shall designate—which should be on some occasion when the representatives of the State will be in Raleigh.

I suggest to you that this committee be instructed to ask General M. W. Ransom to make the presentation speech on that occasion, and I make that as a motion.

Carried.

Dr. Thomas.—My idea was that this balance and so much more as may be necessary be taken from the treasury of this Society to defray any expenses incident to this presentation.

By the President.—That is a matter for the Society to settle.

So ordered.

By the President.—Ladies and Gentlemen;

I have the pleasure to-night of introducing Dr. John C. Rodman, annual orator, who will now address us.

Oration by Dr. Rodman.

President.—Ladies and Gentlemen; I now have the pleasure of introducing Dr. Eugene B. Glenn, of Asheville.

Annual essay read by Dr. Glenn.

Before adjournment, I desire to announce that the meeting will be called to order to-morrow morning at 8:30 instead of 10 o'clock.

The nominating committee made the following report which was adopted.

Orator.—J. H. Manning, Chapel Hill.

Essayist.—E. A. Moye, Greenville.

Leader of Debate.—A. S. Pendleton, Warrenton.

Board of Censors.—Francis Duffy, Newbern. W. H. Whitehead, Rocky Mount, K. P. Battle Jr., Raleigh, W. P. Whittington, Asheville, W. H. Wakefield, Charlotte.

Legislative Committee.—R. H. Lewis, Raleigh, T. E. Anderson, Statesville, P. L. Murphy, Morganton, J. W. McGee, Jr., Raleigh, J. F. Highsmith, Taylorsville.

Obituary Committee.—B. K. Hays, Oxford, W. C. Galloway, Wilmington, J. W. Jones, Goldsboro.

Delegates to the American Medical Association.—E. C. Laird, Hot Springs. Eug. B. Glenn, Asheville.

Five names were handed in by the committee but as we are not allowed only two delegates the two first names were chosen.

Delegates to the Va. Medical Society.—A. Cheatham, Durham, H. T. Bass, Tarboro, J. A. Williams, Reidsville.

Delegates to S. C. Medical Society.—J. M. Flippin, Salisbury, J. M. Blair, Monroe, A. J. Crowell, Charlotte.

The Society then adjourned until 8.30 A. M.

Society called to order at 8:30 a. m. Dr. A. J. Crowell read a paper on "Retention of Urine" which was discussed by Dr. Sikes.

Dr. J. Ernest Stokes then read a paper on "Cancer of the Uterus."

Dr. F. O. Rogers read a paper on "The Urine" which was discussed by Dr. Kirby.

Dr. John B. Wright read a paper on "Creosote," discussed by Drs. Duffy, Kent, Robinson, Smoot and Highsmith.

Dr. B. R. Graham presented a paper on "The spirit of Commercialism."

Dr. E. A. Moye read a paper on "Perineal Lacerations," discussed by Dr. Highsmith.

Dr. M. E. Street read a paper on "Good Roads," discussed by Drs. Crowell and Sikes.

Dr. Francis J. Kirby read a paper on

"Appendicitis," which was discussed by Drs. Royster and Stokes.

Dr. Wm. A. Graham, of Durham, read a paper on the "Causes of Gynecologic disease."

The new officers were now installed and in the absence of Dr. Knox the Society was turned over to C. A. Julian one of the vice presidents. Dr. Julian then read the following appointments made by the President.

Practice.—P. J. Macon, Warrenton.

Med. Jurisprudence and State Med.—Benj. K. Hays, Oxford.

Anatomy and Surgery.—J. M. Flippin, Salisbury.

Railway Surgery.—P. J. Thomas, Wilmington.

Materia Medica and Therapeutics.—S. E. Koonce, Pollocksville.

Obstetrics.—H. McK. Tucker, Raleigh.

Gynecology.—J. F. Highsmith, Fayetteville.

Chemistry and Physiology.—Frank Holmes, Clinton.

Pathology and Microscope.—S. H. von Ruck, Asheville.

Society then adjourned sine die.

Geo. W. Pressly,	Robt. S. Young,
Secretary.	President.

Dr. S. M. Devaga.

In the death of Dr S. M. Devaga of Chester, S. C. the South loses one of its ablest and most eminent physicians.

Although comparatively a young man he had won quite an enviable reputation as a physician and surgeon.

Dr. Devga was a graduate of the Charleston Medical College and had taken several courses in medicine and surgery in Philadelphia and New York. He was in this way enabled to keep thoroughly abreast of the times in everything pertaining to his profession. In fact it has been said of him that he was ahead of the times. For several years he has been in failing health and had practically ceased the practice at the time of his death.

Death of Dr. Luther B. Grady.

We regret exceedingly to learn from the Atlanta Journal-Record of Medicine of the death of Dr. Grady, who was stricken with apoplexy while stationed at Lipa, Phillipine Islands. Dr. Grady was 37 years of age, a native of North Carolina, a graduate of the College of Physicians and Surgeons

of New York, formerly an esteemed practitioner of Atlanta, and editor of the Atlanta Medical and Surgical Journal. Dr. Grady entered the army during the war with Spain and at the time of his death was major and surgeon of the Thirty-fifth Infantry, United States Volunteers.

As student he was unusually bright, as a practitioner he was a skilful operator, and as an editor he had few equals. In the death of Dr. Grady, the profession of the South has lost one of its most prominent members.

Russian Rambles.

Russian Rambles, by I Hapgood, contains the following statement: "Very few Russians wear anything but linen underwear, foreigners who have been accustomed to wear flannels are force to abandon them in Russia."

The climate of Russia is known for its severity. Experience has taught the Russians that flannels weaken the skin and put those who wear them in constant danger of colds and pneumonia; hence they clothe themselves in the safer and more trustworthy linen underwear.

The Dr. Deimel trade mark on Linen-Mesh Underwear is equal to the sterling mark on silver.

Dysentery and Flatulence.

The griping pain and flatulence which accompany bowel and stomach complaints, particularly during the heated term, are so readily overcome and controlled by the timely administration of one or two antikamnia and salol tablets, repeated every two or three hours, that it behooves us to call our readers' attention to the grand efficacy of this well known remedy in these conditions. The above doses, are of course, those for adults. Children should be given one-fourth tablet for every five years of their age. When the attack is very severe, or when the disturbance is evidenced at or near the time of the menstrual period, we find it preferable to give two antikamnia and codeine tablets, alternately with the antikamnia and salol tablets. The latter tablets promptly arrest excessive fermentation and have a pronounced sedative effect on the mucus membranes of the bowels and stomach, and will check the various diarrhoeas without any untoward effect.

NORTH CAROLINA BOARD OF MEDICAL EXAMINERS.

Record of Three Years 1897, 1898 and 1899

(Nongraduates admitted to examination.)

Names of College of Graduates.	Applied.	Licensed.	Rejected
University, National, D. C.	1	1	
University of Missouri.	1	1	
University of Maryland,	42	38	4
University of Pennsylvania,	4	4	
University Coll. of Med., Va.	13	13	
University of Tenn.	1	1	
University of N. Y. and Bellevue,	7	6	1
University of Virginia,	4	4	
University of Vermont,	1	1	
University, U. S. Grant, Tenn.	5		5
University of Kentucky,	1		1
University of Tulane, La.	2	2	
University of Georgia,	3		3
University of Louisville, Ky.	1	1	
University Vanderbilt, Tenn.	11	6	5
University of Nashville, Tenn.	6	4	2
University of Paris, France,	1	1	
University Georgetown, D. C.	1	1	
University Columbian, D. C.	1	1	
University of Baltimore,	2	2	
College of P. and S., N. Y.	2	2	
College of P. and S., Boston,	1	1	
College of P. and S., Baltimore.	4	3	1
Kentucky School of Med.	6	3	3
Med. College of Va.	9	8	1
Leonard Med. College (col.) N. C.	14	11	3
Atlanta Med. College, Ga.	3	2	1
N. C. Med. College, N. C.	11	5	6
Baltimore Med. College, Md.	17	13	4
Long Island Med. College, N. Y.	5	5	
S. C. Med. College, S. C.	2	2	
Louisville Med. College, Ky.	7	6	1
Illinois Med. College, Ill.	1	1	
Missouri Med. College, Mo.	1	1	
Chicago Homeop. Med. College, Ill.	1	1	
Med. College of Ala. Ala.	1	1	
Medico-Chirurgical, Penn.	1	1	
Jefferson Medical College, Penn.	1	1	
St. Louis Medical College, Mo.	1	1	
Ohio Medical College, O.	3	2	1
Medical College of Maine, O.	1	1	
Southern Medical College, Ga.	2	1	1
Laura Memorial Medical College, O.	1	1	
Nongraduates,	43	25	18
Totals,	246	185	61

For six years ending June, 1902.

College of Graduation.	Applied.	Licensed.	Rejected.
University of Maryland,	79	74	5
“ “ Michigan,	4	4	
“ “ U. S. Grant, Tenn.	13	3	10
“ “ of Colorado,	2	1	1
“ “ Nashville, Tenn,	15	8	7
“ “ Georgetown,	1	1	
“ “ Pennsylvania,	12	12	
“ “ Paris France,	1	1	
“ “ Kentucky,	2	2	
“ “ New York & Bellevue, N. Y.	9	8	1
“ “ Tulane, La.	4	4	
“ “ of Vanderbilt, Tenn.	11	6	5
“ “ Georgia,	8	4	4
“ “ Howard, D. C.	3	1	2
“ “ of The South, Tenn.	2	1	1
“ “ Baltimore, Md.	5	2	3
“ “ Louisville, Ky.	2	2	
“ “ College of Medicine, Va.	42	40	2
“ “ of Tennessee,	7	4	3
“ “ Columbian, D. C.	2	2	
“ “ Yale, Conn.	1	1	
“ “ of Virginia,	7	7	
“ “ Wooster, O.	1	1	
“ “ Central of Ky.	1	1	
“ “ of Vermont,	2	2	
College of P. and S. Baltimore, Md.	6	6	
“ “ “ “ St Louis, Mo.	1	1	
“ “ “ “ Atlanta, Ga.	9	5	4
“ “ “ “ New York,	5	5	
“ “ “ “ Ontario,	1	1	
“ “ “ “ Boston, Mass.	1	1	
Woman's Medical College, New York,	3	3	
Syracuse Medical College, New York,	1	1	
Medical College of Virginia,	24	20	4
Baltimore Medical College, Md.	24	18	6
Medical College of South Carolina,	11	7	4
Jefferson Medical College Penn.	9	9	
Leonard Medical College, N. C.	30	20	10
Kentucky School of Medicine,	7	4	3
North Carolina Medical College,	38	28	10
Southern Medical College, Ga.	6	2	4
Starling Medical College, O.	1		1
Meharry Medical College, Tenn.	3		3
Medical College of Ala.	2	2	
Chicago Homeop. Med. College, Ill.	2	2	
Atlanta Medical College, Ga.	5	4	1
Maryland Medical College, Md.	3	1	2
Dartmouth Medical College, N. H.	2	2	
Louisville Medical College, Ky.	8	7	1
Tennessee Medical College, Tenn.	3		3
Long Island Medical College, N. Y.	5	5	
Missouri Medical College Mo.	1	1	
Medico-Chirurgical College, Pa.	1		
St. Louis Medical College, Mo.	1	1	
Ohio Medical College, O.	3	2	1

College of Graduation.	Applied.	Licensed	Rejected
Med. Dept. National Uni. D. C.	1	1	
Laura Memorial Medical College, O.	1	1	
Illinois Medical College, Ill.	1	1	
John Hopkins Medical School Md.	1	1	
Nongraduates,	43	25	18
Total,	503	382	121

Fortieth Regular Annual Session held at Wilimington, N. C., June 4-12, 1902.

College of Graduation.	Applied.	Licensed.	Rejected.
University of Maryland.	13	13	
" " Michigan,	2	2	
" " U. S. Grant, Tenn.	5	3	2
" " Colorado,	1	1	
" " Virginia,	1	1	
" " Nashville Tenn.	2	2	
" " Pennsylvania,	1	1	
" " Kentucky,	1	1	
" " New York & Bellevue, N.Y.	2	2	
" " Tulane La,	1	1	
" " of Georgia, Ga.	3	3	
" " Howard, D. C.	1		1
" " of The South, Tenn.	1	1	
" " Baltimore, Md.	2		2
" " Louisville, Ky.	1	1	
" " College of Medicine, Va.	2	1	1
College of P. and S. Baltimore, Md.	2	2	
North Carolina Medical College, N. C.	16	14	2
Maryland Medical College, Md.	1	1	
Jefferson " " Penn.	3	3	
College of P. and S. N. Y.	1	1	
Baltimore Medical College, Md.	1	1	
Louisville Medical College, Ky.	1	1	
Dartmouth Medical College, N. H.	1	1	
College of P. and S., St. Louis, Mo.	1	1	
Womans Medical College, N. Y. Inf.	1	1	
South Carolina Medical College, S. C.	1	1	
Medical College of Va.	3	3	
Atlanta Medical College, Ga.	1	1	
Southern Medical College of Atlanta, Ga.	1	1	
Atlanta College of P. and S. Ga.	3	1	2
Tennessee Medical College, Tenn.	1		1
Memphis Hospital College of Med. Tenn.	1		1
Leonard Medical College, N. C.	7	5	2
John Hopkin's Med. School Md.	1	1	
	86	72	14

Record for 3 years ending June, 1902—Only graduates admitted to Examination.

Applicants' College of Graduation.	Applied.	Licensed.	Rejected.
University of Maryland,	37	36	1
“ “ Michigan,	4	4	
“ “ U. S. Grant, Tenn.	8	3	5
“ “ of Colorado,	2	1	1
“ “ Nashville, Tenn.	9	4	5
“ “ Pennsylvania,	8	8	
“ “ Kentucky,	1	1	
“ “ N. Y. & Bellevue, N. Y.	2	2	
“ “ Tulane, La.	2	2	
“ “ of Georgia,	5	4	1
“ “ Howard, D. C.	3	1	2
“ “ The South, Tenn.	2	1	1
“ “ Baltimore, Md.	3		3
“ “ Louisville, Ky.	1	1	
“ “ College of Med., Va.	29	27	2
“ “ Tennessee,	6	3	3
“ “ Columbian, D. C.	1	1	
“ “ Yale, Conn.	1	1	
“ “ of Virginia,	3	3	
“ “ Wooster, O.	1	1	
“ “ Central of Ky.	1	1	
“ “ of Vermont,	1	1	
College “ P. & S. Baltimore, Md.	4	4	
“ “ P. & R. St. Louis, Mo.	1	1	
“ “ P. & S. Atlanta, Ga.	9	5	4
“ “ P. & S. N. Y.	3	3	
“ “ P. & S. Ontario,	1	1	
Womans Med. College, New York,	3	3	
Syracuse Med. College, New York.	1	1	
Medical College of Va.	15	12	3
Baltimore Med. College, Md.	7	5	2
Medical College of S. C.	9	5	4
Jefferson Med. College,	8	8	
Leonard “ “ N. C.	16	9	7
Kentucky School of Medicine,	1	1	
North Carolina Medical College,	27	23	4
Southern Med College, Ga.	4	1	3
Starling Medical College, O.	1		1
Meharry Medical College, Tenn.	3		3
Medical College of Ala.	1	1	
Chicago Homeop. Medical College,	1	1	
Atlanta Medical College, Ga.	2	2	
Maryland Medical College,	3	1	2
Dartmouth Medical College.	2	2	
Louisville Medical College,	1	1	
Tennessee Medical College,	3		3
John Hopkins Medical School,	1	1	
	257	197	60

Report of Secretary of the Board, Showing date, place of Graduation and grade
by Members of each Applicant, June, 1902, Meeting.

1	R	University of Maryland,	1894	85	3-7
2	"	" " Michigan,	1901	86	6-7
3	"	" " Maryland,	1902	84	6-7
4	"	North Carolina Medical College,	1902	85	5-7
5	"	U. S. Grant University,	1900	84	3-7
6	"	University of Maryland,	1902	90	4-7
7	"	North Carolina Medical College,	1902	85	6-7
8	"	Jefferson Medical College,	1902	87	1-7
9	"	University of Michigan,	1901	87	1-7
10	"	Woman's Med. College N. Y. Infirmary,	1891	87	2-7
11	"	University of Colorado,	1894	80	4-7
12	"	" " Nashville,	1901	80	4-7
13	"	North Carolina Medical College,	1902	88	3-7
14	"	South Carolina " "	1894	80	4-7
15	"	Tennessee " "	1902	75	6-7
16	"	University of Penn.	1901	88	6-7
17	"	U. S. Grant University,	1900	80	6-7
18	"	Jefferson Medical College,	1902	85	1-7
19	"	College of P. and S. Atlanta, Ga.	1902	84	1-7
20	"	" " " " " "	1902	75	3-7
21	"	North Carolina Medical College,	1902	88	
22	"	" " " " " "	1902	90	5-7
23	"	" " " " " "	1902	90	4-7
24	"	Medical College of Virginia,	1901	84	3-7
25	"	" " " " " "	1900	77	2-7
26	"	North Carolina Medical College,	1902	80	6-7
27	"	Medical College of Virginia,	1901	81	1-7
28	"	Atlanta Medical College,	1895	69	2-7
29	"	Medical College of Virginia,	1901	82	6-7
30	"	North Carolina Medical College,	1898	77	6-7
31	"	Memphis Hospital College of Medicine.	1902	74	2-7
32	"	North Carolina Medical College,	1901	84	4-7
33	"	" " " " " "	1902	85	3-7
34	"	University and Bellevue. N. Y.	1902	89	2-7
35	"	North Carolina Medical College,	1902	88	3-7
36	"	" " " " " "	1902	82	6-7
37	"	University of Maryland,	1899	80	4-7
38	"	Howard University,	1900	75	2-7
39	"	Leonard Medical College,	1901	85	1-7
40	"	" " " " " "	1902	82	1-7
41	"	" " " " " "	1901	84	4-7
42	"	" " " " " "	1901	82	6-7
43	"	" " " " " "	1901	80	2-7
44	"	" " " " " "	1901	76	1-7
45	"	" " " " " "	1902	75	5-7
46	"	University of Kentucky,	1901	88	
47	"	University of Maryland,	1902	88	1-7
48	"	University of Georgia,	1902	90	1-7
49	"	University of Georgia,	1902	85	2-7
50	"	University of Maryland,	1902	88	6-7
51	"	Southern Medical College of Atlanta,	1897	80	
52	"	U. S. Grant University,	1900	75	4-7
53	"	College of P. and S., Atlanta,	1902	85	1-7
54	"	Bellevue Hospital Medical College,	1895	92	5-7
55	"	University of Maryland,	1902	83	
56	"	Tulane University of La.	1901	88	
57	"	North Carolina Medical College,	1902	80	2-7
58	"	U. S. Grant University,	1900	74	4-7
59	"	University of Maryland,	1902	83	6-7
60	"	College of P. and S., Baltimore,	1902	80	2-7

61	"	University of the South,	1901	84	1-7
62	"	University of Baltimore,	1902	83	
63	"	. S. Grant University,	1897	80	
64	"	Maryland Medical College,	1901	80	3-7
65	"	University of Louisville,	1900	80	
66	"	University of Baltimore,	1900	70	
67	"	Jefferson Medical College,	1895	84	6-7
68	"	College of P. and S., New York,	1871	82	3-7
69	"	Medical College of Virginia,	1901	88	
70	"	Baltimore Medical College,	1891	55	6-7
71	"	North Carolina Medical College,	1902	89	6-7
72	"	College of P. & S., Baltimore,	1900	86	
73	"	North Carolina Medical College,	1902	77	1-7
74	"	University of Maryland,	1901	80	4-7
75	"	" "	1902	91	5-7
76	"	" "	1902	80	
77	"	" "	1902	84	1-7
78	"	" "	1902	83	5-7
79	"	North Carolina Medical College,	1902	84	
80	"	Louisville Medical College,	1896	81	6-7
81	"	University of Nashville,	1901	84	1-7
82	"	Dartmouth Medical College,	1859	80	
83	"	College of P. & S., St. Louis,	1901	80	
84	"	Johns Hopkins Medical College,	1902	90	5-7
85	"	University of Georgia,	1891	82	1-7
86	"	University of Virginia,	1902	86	1-7

J. HOWELL WAY, Sec'y.,
Waynesville, N. C.

Applicants Licensed, 40th Annual Session North Carolina State Board of Medical Examiners, Wrightsville Beach, Wilmington, N. C., June 11, 1902:

Richard H. Johnston, Baltimore Md.; Herbert H. Waite, Asheville, N. C.; Fred W. Phifer, Statesville, N. C.; Sam'l M. Withers, Davidson, N. C.; Jno. Walter Jones, Boone, N. C.; Chas. Lee Duncan, Beaufort, N. C.; J. P. Matheson, Taylorsville, N. C.; Robt. Horlee Bellamy, Wilmington, N. C.; Jacob H. Shufford, Hickory, N. C.; Edith B. Blackwell, Greensboro, N. C.; Catherine P. Hayden, Raleigh, N. C.; Lloyd P. Russell, Fletcher, N. C.; Wm. H. Boone, Elon College, N. C.; James Frampton, Hendersonville, N. C.; Joseph Graham, Hillsboro, N. C.; Emmanuel A. Hennessee, Glen Alpine, N. C.; William K. Lane, Goldsboro, N. C.; McLain Rogers, Clyde, N. C.; Isham F. Hicks, Faison, N. C.; Eugene Yount, Conover, N. C.; J. Rufus McCracken, Clyde, N. C.; Lewis C. Covington, Vanceboro, N. C.; Archibald B. McQueen, Raeford, N. C.; Iram Hardy, Washington, N. C.; James M. Taylor, Pittsboro, N. C.; W. W. Washam, Davidson, N. C.; L. R. Kirkpatrick, Blackstock, S. C.; Parks M. King, Concord, N. C.; Lewis C. Skinner, Davidson, N. C.; Jno W. McLean, Cameron, N. C.; James E. Cathell, Tyro Shops, N. C.; Peter H. Wil-

liams (col.) West Raleigh, N. C.; Jno W. Walker, (col.) Asheville, N. C.; Clarence S. Brown, (col.) Winston, N. C.; William B. Sharp, (col.) Harrellsville, N. C.; James W. Watkins, (col.) Reidsville, N. C.; Lynn McIver, Sanford, N. C.; Jno. R. Paddison, Mt. Airy, N. C.; George P. Edwards, Hildebran, N. C.; George E. Morton, Granville, N. C.; Ben. F. Barnes, Elm City, N. C.; Jno. L. Waltz, London, N. C.; C. E. Reitzell, Liberty, N. C.; Arthur R. Gerard, Flat Rock, N. C.; Henry Byrne Maxwell, Whiteville, N. C.; Fred R. Cooke, Louisburg, N. C.; James A. Sisk, Harmony, N. C.; Jas. M. Williams, Warsaw, N. C.; C. B. Wiseman, Henrietta, N. C.; Edwin S. English, Brevard, N. C.; E. A. Houser, Fallston, N. C.; L. B. Harrell, Caroleen, N. C.; Mc.G. Andrews, Connelly Springs, N. C.; Geo. Oates, Grover, N. C.; Chas. E. Reed, Hot Springs, N. C.; George Huntington, Asheville, N. C.; W. P. Exum, Jr., Saulston, N. C.; H. S. Munroe, Lenoir, N. C.; Geo. K. Collier, Wilmington, N. C.; Geo. H. Costner, Lincolnton, N. C.; Jno. Lewis Hanes, Winston, N. C.; L. C. Keerans, Charlotte, N. C.; Herbert D. Walker, Creswell, N. C.; Pride J. Thomas, Wilmington, N. C.; Edward W. Phifer, Morganton, N. C.; James McK. Hunter, Cherryville, N. C.; Jas. L. Ballow, Crumper, N. C.; William, H. Grant, Pine Bluff, N. C.; J. Warren Bailey, Mineral

Springs, N. C.; Carey P. Rogers, Raleigh, N. C.; Hugh Wilson, Williams's Mills, N. C.; Edward M. Gayle, Warrenton, N. C.

Total applications, 86.

Licensed, 72.

Rejected, 14.

J. HOWELL WAY, Secy,

BOOK REVIEWS.

A System of Physiologic Therapeutics. A practical exposition of the methods other than drug-giving, useful in the prevention of disease and in the treatment of the sick. Edited by Solomon Solis Cohen, A.M., M.D. Vol. IX. Hydrotherapy, Thermotherapy, Heliotherapy, and Phototherapy. By Dr. Wilhelm Winternitz, assisted by Dr. Alois Strasser and Dr. B. Buxbaum, and Balneology and Crounotherapy by Dr. E. Heinrich Kisch. 8vo, pp. 570. Illustrated. Philadelphia: P. Blakiston's son & Co. 1902. Price for complete set of II Volumes, Cloth, \$27.50; Half Morocco, \$38.50.

In the language of one of our contemporaries: "Prof. Wilhelm Winternitz, the learned teacher of clinical medicine, has been ably seconded by Dr. Alois Strasser, the able instructor in clinical medicine, and Dr. Buxbaum the well known expert in hydrotherapy. These three contribute the portion of the volume before us which is concerned with hydrotherapy. This portion is divided into three parts. Part I. deals with the physiologic base of hydrotherapy. In the different chapters of this part are discussed the effects of hydrotherapeutic measures upon special tissues and organs; the chemical effects and internal use of water; the reaction and the necessity that it be complete; and the fundamental principals and practical applications of heliotherapy and phototherapy. In part II. are considered the technic and the methods of hydrotherapy. The different chapters are devoted to the general bath, partial baths and other procedures, the wet compress, wet and dry pack, bags and coils, irrigation and sweat baths, additional local applications of heat and cold. In part III. is given special hydrotherapy—this is probably the portion which will prove the most interesting as well as the most immediate practical value to the physician. Chapter III. deals with the application of the bath in acute febrile infectious diseases. In the next chapter, intoxications, anemia, metabolic disorders, diseases of the nervous system and of the muscles and joints, diseases of the respira-

tory organs, diseases of the circulatory apparatus, diseases of the digestive organs, and diseases of the urinary apparatus of the female sexual organs, and of the skin. Veneral diseases close this chapter and part. Taken altogether these three parts give a most thorough and complete conspectus of the subject of hydrotherapy in some 206 pages, and it is withal scientific in treatment and of practical application by any intelligent practitioner of medicine. It is a form of therapeutics which is destined to open up a new field for English reading physicians.

Following this portion of the work we are given some supplemental chapters on heliotherapy, phototherapy, thermotherapy, and saline infusions and irrigations. The chapters are respectively devoted to heliotherapy, general and local use of sunlight; electro phototherapy, including the arc and the incandescent electric light bath, principles of thermotherapy, its practice and modes of application; general and local applications of heat, in which all the different methods of applying heat are considered; and saline irrigations and infusions, in which are included enteroclysis, peritoneal and intra-arterial injections. These supplemental chapters have all the latest best discoveries included in the subject matter, thus rounding up the whole subject in a thorough and satisfactory manner. The chapters on phototherapy and thermotherapy are by Dr. J. N. Kellogg, of Battle Creek, Michigan, and that on saline irrigation and infusions is by Dr. Harvey Cushings of Johns Hopkins Hospital, Baltimore.

The remaining portion of the volume is devoted to balneology and crounotherapy. The latter word has been coined to indicate what is usually known as the spring-cure or cure by means of mineral waters. After an introduction in which is given a classification of mineral waters with especial reference to the characteristics and geographical distribution of the medicinal springs in the United States, the true subject matter is considered. This introduction has been written by Dr. A. C. Peale, of Washington, D. C., and the notes on American Springs are by Dr. Guy Hinsdale, the well known authority on this subject. In this portion there are two parts, the first one being on mineral waters and their uses; the second one is on balneotherapeutic and crounotherapeutic indications for the individual forms of chronic disease. Part I. is divided into two sections—section I. is devoted to mineral baths; this is divided into chapters whose heads on constitutional and general effects of mineral baths, acrotothermal baths, acid baths and brine baths;

sea baths, sulphur baths, iron baths, gas baths, and mud baths; mineral steam baths, medicated baths. Section II., which is concerned with crounotherapy; the use of mineral waters for drinking-cures. This section is a very interesting one but little understood by the rank and file of the profession. The various chapters in this section are respectively devoted to the principles of crounotherapy, alkaline mineral waters, sodium chlorid waters, bitter waters, sulphurous waters, iron or chalybeate waters, earthy mineral waters and acrothermal waters. Part II. is concerned with balneotherapeutic and crounotherapeutic indications for the individual forms of chronic disease. This is a most important chapter of the work and of the highest importance. The importance of this may be judged by the following short list of the chapters treated of in the different chapters. They are as follows: Constitutional diseases and disorders of metabolism; diseases of the respiratory organs; diseases of the heart and blood-vessels; diseases of the digestive organs; diseases of the nervous system; diseases of the urinary organs; diseases of the genitalia; diseases and injuries of the joints; and diseases of the organs of special senses, including the skin, the eye and the ear. To conclude the volume there is an appendix on additional methods for the therapeutic use of water, heat, cold, light and mineral baths, in which even refrigerated light is mentioned.

Such is but a brief synopsis of this volume and it is a good index to the possibilities of physiological therapeutics. It may seem surprising to a great many, but the study and application of methods non-medical show the greater possibilities which lie outside of the pharmacopeia. We are pleased to see this effort to suppress drug-ging and we are certain that it will result in much good. The authors who have contributed to this series are men of high reputations, and they have done good, honest work. Any one who has had even but a small experience in the subjects of which they write will readily acknowledge the truth of everything which they advance. To those who have had no experience, our advice is to obtain a copy of this work and learn. Before closing we must not omit a mention of the fact that the illustrations in this volume are most excellent as well as the typographical appearance. The paper is above the average, and it may be stated in general terms that the publishers have made the book a handsome one. Nor must we forget to allude to the very full index, which embraces thirty-three double column pages, printed in small type. This alone

should serve as an indication of the thoroughness of the work. In fact, we must express that we are enthusiastic over this treatise, which overtops any published on the subject and which promises to remain the best one on physiologic therapeutics for many years to come. The translations have been most excellent, and we desire to congratulate both editor and publisher upon the successful fruition of this volume. We know that those which are to follow will be equally as good.

A Manual of Otology. By Gorham Bacon, A., M., M. D., Professor of Otology in Cornell University Medical College, New York. With an introductory Chapter by Clarence J. Blake, M. D., Professor of Otology in Harvard Medical School, Boston. New (3d) Edition. In one handsome 12mo. volume of 437 pages, with 120 engravings and 7 plates in colors and monochrome. Cloth, \$2.25, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

Dr. Bacon's Manual achieved a forefront position in otological literature in its first edition and has steadily maintained it since, improving with each successive edition. It is a good example of a volume which is both modest in size and comprehensive in contents, for it covers the best otological knowledge of America and Europe. Of course it is not exhaustive, nor could any single volume claim to be so, but it is excellent in the judgment displayed in the selection of knowledge and in the clear perspective in which it is presented. The author has given "sufficiently full consideration to those diseases of the ear with which the student or practitioner will frequently meet to enable them to understand the conditions and apply the appropriate treatment." Dr. Bacon is almost too modest in this statement, for his volume should interest specialists as well. He has conscientiously revised it, both in text and illustration, to reflect the latest and best in its subject.

A Reference Handbook of the Medical Sciences, embracing the entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. A New Edition, Completely Revised and Rewritten. Edited by Albert H. Buck, M. D., New York City. Vol. IV. Illustrated by Chromo-Lithographs and Eight Hundred and Fifty-nine Half-tone and Wood Engravings. New York, William Wood & Co. Publishers. Price, per volume: Muslin, \$7.00; Leather, \$8.00; Morocco, \$9.00.

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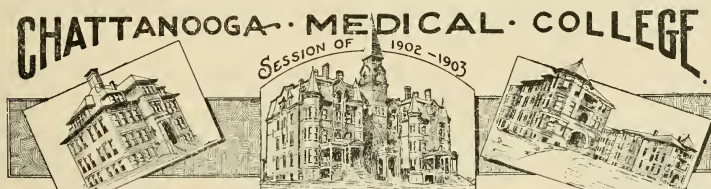
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and embraces such a large variety of topics, as to make it of the greatest practical utility, not only to general practitioners, but also to those who are interested more particularly in special departments of medical knowledge. It consists of a collection of concisely written essays on all the important topics belonging to the broad domain of Medicine, Surgery, and the allied sciences. Its subject matter is alphabetically arranged, thus admitting of instant and ready reference, with no loss of time in reading over page after page to find the precise item desired. The topics are treated in such a thorough manner the reader will rarely, if ever, find it necessary to consult larger special treatises or monographs for the information of which he may stand in need. The great advance made in the quality of illustrations, through the discovery of new processes, and the perfecting of mechanical technique, as well as from the greater experience and taste of those now superintending such matters, are apparent in the Reference Handbook. A great number of full-page plates, by chromo-lithography, photogravure, and other processes, is to be inserted. No pains or expense has been spared to make this work the most sumptuously illustrated publication of recent times.

The Reference Handbook is electrotyped from new type, especially made for it, and printed on extremely fine paper, which combines a high surface with the best wearing qualities; an important question in the case of a work of this sort. It will consist of eight splendid imperial octavo volumes, thoroughly illustrated. Each volume will contain about 800 pages, printed in double column, and each page containing as many words as are found upon three and one-half ordinary full octavo pages. The contents of the set will therefore equal that of fifty or more large volumes of the usual octavo size.

The Reference Handbook is designed to be a constant daily companion and ready reference on all branches of Medicine, Surgery and the collateral sciences. The Editor-in-Chief is Albert H. Buck, M. D., and over five hundred eminent specialists have agreed to contribute. No such number of prominent writers and teachers has ever before been associated together in the preparation of a work specially designed for the medical profession.

"The Practical Medicine 'Series of Year-Books.'" Volume VI—General Medicine. Edited by Frank Billings, M. S., M. D., with the collaboration of S. C. Stanton, M. D., May, 1902. Chicago: The Year-Book Publishers, 40 Dearborn street.

Volume VI completes the subject of General Medicine. The editors pay a graceful tribute to American medicine in view of "the important part which American physicians have taken in some of the most important medical discoveries of recent times, namely, in relation to the transmission of yellow fever, the affirmation of bacterial cause of dysentery and the relation of gall-stones and cholangitis to pancreatic disease." This part is devoted principally to gastrointestinal diseases, typhoid fever occupying practically one-third of the space. It is very satisfactory and the hope of its distinguished editor that the volumes give "a fairly complete resume of the best literature of the year on general medicine" is well founded.

The Artificial Feeding of Infants. Including a Critical Review of the Recent Literature of the Subject. By Charles F. Judson, M. D., Physician to the Medical Dispensary of the Children's Hospital, and J. Claxton Gittings, M. D., Assistant Physician to the Medical Dispensary of the Children's Hospital, Philadelphia: J. B. Lippincott Company. Price, \$2.00

The leading pediatricists and scientists of America and Europe have granted permission to the author to cull from their works and writings, thus giving to this work the principal methods of artificial feeding in vogue in all parts of the world, and sufficiently broad in its scope to meet the widely varying needs of different infants, keeping in mind the adjustment of the diet to the requirements of the individual infant if success is to be assured. It will prove to be a much-needed work on the subject.

A Practical Treatise on Smallpox. Illustrated by Colored Photographs from Life By George Henry Fox, A. M., M. D., Consulting Dermatologist to the Health Department of New York City, with the Collaboration of S. D. Hubbard, M. D., S. Pollitzer, M. D., and J. H. Huddleston, M. D. In two parts. Published, 1902, by the J. B. Lippincott Company, Philadelphia and London. Price, \$3.00.

This treatise on smallpox is both valuable and timely. The illustrations, colored photographs taken from life, are especially life-like and give an excellent idea of the different forms and stages of the disease. The book, therefore, comes very near to the value of clinical lectures on this prevalent disease, and will be of great assistance to both students and practitioners in helping them to be able to make an early diagnosis.

The author, a well-known dermatologist of many years' experience, has brought sig-

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nal ability and great enthusiasm to the work, and, aided by trained assistants and large clinical opportunities, he has produced a treatise which surely will meet a need of the present time. The book is in two parts, and, considering the character of the work, the price is reasonable.

Wharton's Minor Surgery and Bandaging. New (5th) edition, thoroughly revised. A Manual of Minor Surgery and Bandaging. By Henry R. Wharton, M.D., Professor of Clinical Surgery in the Woman's Medical College, Surgeon to the Presbyterian Hospital, Philadelphia, etc. In one 12mo volume of 612 pages, with 509 illustrations, many of which are photographic. Cloth, \$3.00, net. Just Ready. Lea, Brothers & Co., Publishers, Philadelphia and New York.

Surgery progresses so rapidly that frequent revision is necessary to keep any surgical book in line with its advances. The wide favor accorded to Dr. Wharton's work affords him frequent opportunities for revisions, which are never slighted. The volume contains much more than its title indicates, for while it furnishes a detailed description of the various bandages, surgical dressings and minor surgical procedures employed in present-day surgery, it has in addition sections on Tracheotomy, Intubation, Ligation of Arteries, Amputations, Operative Procedures on the Cadaver, and also a valuable chapter on Surgical Bacteriology.

The author's clear, terse style, with an abundant selection of most helpful pictures together make a work of great value for the practitioner and student, the popularity of which increases with each edition.

Progressive Medicine, Vol. II, June, 1902. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 440 pages, 28 illustrations. Per volume, \$2.50, by express prepaid to any address. Per annum, in four cloth-bound volumes, \$10.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

The June issue of Progressive Medicine contains a series of valuable contributions on subjects of great importance to the general practitioner.

Dr. Wm. B. Coley considers the Surgery of the Abdomen, including Hernia. His article is full and thoroughly practical, illus-

trating the great field for surgical therapeutics in the treatment of many diseases of the digestive organs which have hitherto been considered as solely medical affections.

Dr. John G. Clark, covers the field of Gynecology with great thoroughness. All the new operations and devices for the treatment of disease of women, as well as advances in gynecological pathology and technique are fully considered.

Dr. Alfred Stengel in his article on the Diseases of the Blood and Ductless Glands, the Hemorrhagic and Metabolic Diseases, handles these difficult subjects in such a lucid and practical way as to make his contribution of value not only to the pathologist, but also to the physician, who, from the exigencies of his work, may find difficulty in keeping pace with the most recent advances which have been especially remarkable in the study of the blood.

The article on Ophthalmology by Dr. Edward Jackson is marked by its author's characteristic facility of dealing with the subject in such a way as to be of value to the oculist and at the same time to meet the needs of the general practitioner.

As usual, illustrations are employed liberally wherever they can aid in the elucidation of the text. The abstracts are full and give the complete gist of the original papers from which they are taken. Their value is greatly enhanced by the comments of the various editors upon them.

Comments of General Pathology. By Alfred Edward Thayer, M.D., Assistant Instructor in Gross Pathology, Cornell Medical College; Pathologist to the City Hospital; formerly Fellow in Pathology, Johns Hopkins University; Instructor in Anatomy, Yale Medical College, and Professor of Pathology and Bacteriology, West Virginia University. Containing 78 illustrations. Philadelphia. P. Bakistons' Son & Co. 1902.

For a short, concise but still complete treatise on pathology, Thayer's book will be found a great aid to students and others interested in this branch of medicine, since their practical needs have been especially considered and by the omission of controversial matter and references to authors and articles, the effort to give the subject simplicity has been steadily maintained. The book abounds in illustrations, chiefly borrowed from larger treatises. Bacteriology, too, has received free consideration and not the least attractive part is the chapter on autopsy technique and the preparation of sections. The syllabus upon which Chapter VI. is based is prepared by Prof. Ewing and deserves our hearty endorsement.

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The Neuroses of the Genito-Urinary System in the Male, with Sterility and Impotence. By Dr. R. Uitzmann, Professor of Genito-Urinary Diseases in the University of Vienna. Second Edition. Revised, with notes and a supplementary article on Nervous Impotence, by the translator, Gardner W. Allen, M. D., Surgeon in the Genito-Urinary Department of the Boston Dispensary; Instructor in Genito-Urinary Surgery in Tuft's Medical College. Illustrated. Pages 198. 12mo. F. A. Davis Co., Publishers, Philadelphia. 1902. Price, cloth, \$1.00.

This small volume consist principally of the translation of two monographs, originally published by the late Professor Uitzmann, whose sound pathological teachings and successful methods of treatment are incorporated, is a sufficient guarantee that the volume will be welcomed by numerous physicians in this country, who have not seen the original.

A supplementary article on nervous impotence, by the translator, including some notes, brings the subject down to the present day.

Transactions of the Southern Surgical and Gynecological Association. Vol. xiv. 1901.

This substantially cloth-covered volume of four hundred and fifty pages has been examined by the editor with much interest and pleasure.

The paper by Dr. H. A. Royster, of Raleigh, N. C., entitled Repair of a Complete Laceration of the Perineum in a Girl of nine years old, produced by the finger of the Obstetrician at the Patient's Birth, ascribes a very unusual case. It has been published and republished, abstracted and commented on and discussed in nearly every medical journal in the world.

Transactions of the Vermont State Medical Society, Eighty-Eighth Annual Meeting, 1901.

This volume, as usual is full of valuable and scientific papers. Few state societies in this country show such evidences of prosperity and among its members can be seen names familiar and favorably known to the medical world.

LITERARY NOTES.

Lippincott's Magazine for July is given over to fiction, with but one exception in favor of a timely subject.

The complete novel this month is written by Mabel Nelson Thurston, whose fame is won as a short-story writer. This more important achievement places her among the elect as a novelist. The title "On the Road to Arcady is an invitingly cool one, well chosen for warm weather. A subtitle suggests itself: "The Career of Ethelwyn"—Ethelwyn being a coquette whose "hair curls, eyelashes curl, mouth curls up, even her glances curl," the author declares, and in a wading episode it is discovered that her "toes are the curliest of all." She visits a cousin at her Forest-of-Arden home near Washington City, who dreads Ethelwyn's advent into her Paradise. When the train of "followers" appears her sinks. Of course, Ethelwyn marries the man she is not suspected of caring for, but before this happens there is an abundance of adventure and flirtation. The tale abounds in whimsical humor and is just the right sort to while away idle summer hours.

Following the novel are half a dozen first-rate stories in length and subject. Beulah Marie Dix, the author of "Hugh Gwyeth," contributes a tale of love and bravery in early New England days. Its title is the "The Love of Denys de Vaudrenncœur." A story of smart New York society by Annuet Andrews, called "A Dady, A Mortal and the Four Hundred," is the experience of an English girl who has a position as companion. She thinks "Americans treat the members of their own household much as Christians are supposed to treat their Maker, from whom no secrets are hidden." An amusing Southern story (without dialect) is called "The Rev. Pilgreen's Wooing, by Matt Crim, whose loving sympathy for her homely neighbors in the South is evident in all her stories. "A Sovereign Remedy," by Francis Willins Wharton, is very up-to-date in theme. A millionaire's daughter, tired of having every wish gratified, is dying of sheer ennui. Her father unwittingly hits upon the key to

the situation and the girl is saved from herself. This is remarkably clever—even from a source where so much may be expected. Caroline Ticknor has written nothing with more human feeling than her story called "Antoine's Loves." The book-worm and the widow are real types. Ella Middleton Tybout contributes a ducky tale called "At Fiddier's Bridge." It has a preacher for its hero and is keenly humorous.

A paper called "Bridging the Depths," by Pierce W. Heart, tells how the ocean cables are laid, and tells it to be understood.

The verse of the month is by Bliss Carman, "What are the Great Stars, White and Blue?" Ethno Carbery, "The Wayfarer;" Willa Sibert Cather, "In Rose Time;" and Aloysius Coll, "To a Dying Bee."

The "Walnuts and Wine" department abounds in humor from familiar favorites and some names that are new.

At least of the great monthlies may be fully described as a news magazine in the broadest sense. The Review of Reviews deals with real "news values" from month to month, and keeps abreast of all the current developments that are essentially important and vital. Take the July number just issued; from cover to cover it is packed with comment on "live" matters—facts, problems, and issues that interest the public to-day, and are likely to interest it for days and weeks to come. The various phases of the great anthracite coal strike are presented from four distinct points of view; the British national attitude after the conclusion of the South African peace, and on the eve of the coronation festivities so sadly broken off, is fully described; the retiring French premier, Weldeck-Rousseau, and his successor, M. Combes, are sketched for the first time by an authoritative pen in an American periodical; the characteristics of the new president of Princeton, Woodrow Wilson, so unexpectedly chosen to that office in June are clearly outlined by a college classmate; questions about West Point and its future, suggested by the centenary just celebrated, are answered by a member of the corps of instruction; the methods being adopted by Kansas farmers for solving the problem of labor-supply in the wheat harvest now in progress are fully discussed; and the remarkable edicts just issued by the Empress Dowager, establishing a system of colleges for China, are set forth in detail. The Philippine problem, the Cuban crisis, the isthmian canal situation, the work of Congress, the Atlantic shipping trust, the new American shipbuilding combination, the crop prospects of the sea-

son, and the South American revolutions are some of the other topics covered by this number. Nowhere will one find the vast total of the world's actual news of a month so clearly stated or so well interpreted as the American Monthly Review of Reviews:

With the present number of Forum begins not only a new volume but a new series, having been transformed from a monthly into a quarterly. The general character of the magazine is the same and its high standard is maintained, but its purposes are more specifically those of a review and outlook. It is divided into nine departments, each conducted by a specialist who writes a critical exposition of such events of the last three months as come within his own sphere. These reviews included in most cases estimates of general tendencies as well as comments on specific incidents. In the issue for July-September "American Politics" are discussed by Henry Litchfield West, "Foreign Affairs" by A. Maurice Low, "Finances" by A. D. Noyes, "Applied Science" by Henry Harrison Supplee, "The American Drama" by John Corbin, "Literature" by Frank Jewett Mather, Jr., "Architectural Art" by Prof. A. D. F. Hamlin, "Educational Events" by Ossian H. Lang and "Educational Research" by the editor, Dr J. M. Rice. In addition to these reviews, the new number contains three special articles of the type that appeared in the former series, namely, "Chinese Exclusion," by Hon. Charles Denby, "Germany as a World of Power," Wolf von Schierbrand, and "Sir Walter Besant," by Prof. W. P. Trent. It should be mentioned that the size of the magazine has been permanently increased from 128 pages to 160.

What makes the happy relation between man and woman, is an eternally interesting question, and a clever discussion of why marriages fail, presented by Raford Pyke in his article "The Woman's Side" is certain to receive the very wide consideration which has been given to that author's previous articles on the discussion of woman versus man. The July *Cosmopolitan* seems to be almost equally divided in interest between men and women. "An Experiment in Domestic Fiance" is another entirely novel article which will appeal to women, while some twenty pages devoted to the "Captains of Industry" will receive the consideration of men in all classes of business. The *Cosmopolitan* has undertaken to present a series of brief sketches of the

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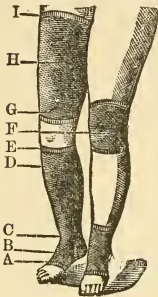


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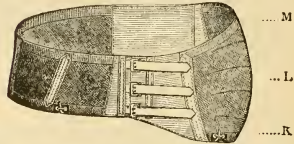
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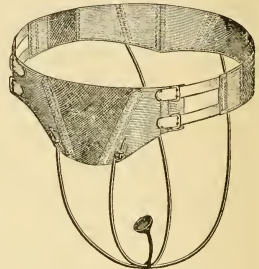
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men who are leaders in finance, manufactures, and commerce, not prepared in an off-hand way, but by writers of the greatest ability who have an exact knowledge of their subjects. The series thus far produced has attracted the widest attention. The industrial changes which have of late been occurring with such rapidity have the widest possible interest for all classes. The knowledge of these men, their derivation, leading characteristics and weaknesses throws much light upon the news of the day in which their names constantly recur.

an abdominal hysterectomy. Just before the uterus was detached from the vaginal wall, the patient showed considerable shock, and consequently the nurse was ordered to give her another high rectal injection of bovine and salt solution, two oz. each. She responded to this beautifully. The operation was completed by the closure of the abdominal wound, the pelvis being drained through the vagina.

Patient was put to bed with the pulse weak and 112. She was given another high rectal injection of bovine and salt solution, three oz. of each. In twenty-five minutes she was conscious, pulse greatly improved, being 100, and full in character. No nausea, thirst or vomiting. The second day the vaginal drain was removed, the wound and the vagina treated by injections of bovine pure, employed t. i. d. Previous to every injection of bovine into the vagina, the cavity was washed out with borax solution. These injections were continued three times a day up to October 16th, when twice in twenty-four hours was deemed sufficient. She was now allowed a light general diet together with bovine. Oct. 24th, the stitches were removed and the abdominal wound found to be healed. From this time on her recovery was uninterrupted and she was discharged cured, Nov. 16th.

ADVERTISEMENTS.

Hysterectomy for Cancer of Uterus.*

Mrs. T., age 47, American. Diagnosis, carcinoma of uterus. Entered hospital Oct. 10, in a greatly run down condition. She was put on an absolute bovine diet, until Oct. 14th, when, at one o'clock, she was given a high rectal injection of bovine and salt solution, three oz. of each, and at two o'clock, under ether anaesthesia, I performed

*T. J. Biggs, M.D., Sound View Hospital, Stamford, Conn.

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The Preventative and Curative Treatment of Hay Fever.

It is difficult to conceive of a more miserable creature in all the world than the hay-fever sufferer. The attack not only makes him exceedingly uncomfortable, but renders him unfit for business or the pleasures of society. Aside from the annoying and continual discharge from the nostrils, the eyes are suffused, the secretion of tears is increased, the nasal passages are obstructed, and an intense burning sensation is experienced: The latter is not entirely limited to the mucous membranes, but not infrequently involves the cutaneous surfaces of the forehead, cheeks and nose. Violent attacks of sneezing occur which are so prolonged, at times, as to completely exhaust the sufferer and bring on severe headache. The condition is one of utter wretchedness, and there is extreme malaise, amounting occasionally to complete prostration. The highest duties become irksome tasks, and many an active, industrious, and useful member of society is completely incapacitated while "the season" lasts.

For three years some inconvenient means of relief has been sought. Change of scene does very well for those, unfettered by business, who can afford to travel. But to many very worthy people a change of scene is out of the question. Naturally the greater number of the afflicted are accustomed to look to the medical profession for the help they need. But what has the medical professional actually accomplished for the permanent relief of the sufferer or the cure of his ailment? There is scarcely a sedative, astringent, tonic, nervine, or alterative drug in the *materia medica* that has not enjoyed an evanescent reputation as a useful remedy in the treatment of hay-fever. Until the discovery of Adrenalin, each had been as much of a disappointment as its predecessor and none had afforded more than the merest temporary relief.

There is increasing evidence that Adrenalin fully meets the indications as a remedial agent in hay-fever. It controls the nasal discharge, allays congestion of the mucous membranes, and in that manner reduces the swelling of the turbinal tissues. As the nasal obstruction disappears, natural breathing is materially aided and the ungovernable desire to sneeze is mitigated. In short, a season of comparative comfort takes the place of the former condition of distress and unrest. Adrenalin blanches the mucous membrane by vigorously contracting the capillaries, and thus reduces local turgescence. It strengthens the heart and overcomes the sense of malaise, so frequently a prominent feature in cases of long standing.

In the treatment of hay-fever the Solution of Adrenalin Chloride should be used. This preparation is supplied in the strength of one part Adrenalin Chloride to one-thousand parts Normal Saline Solution, and is preserved by the addition of 0.5 per cent. Chlorotone. The 1-1000 solution should be diluted by the addition of four parts of Normal Salt Solution, and sprayed into the nares with a "Cocaine" atomizer. In the orifice the 1-1000 solution may be applied in full strength. A small pledget of cotton is wrapped about the end of an applicator and moistened with a few drops of the solution (1-1000). The speculum is then introduced, the patient's head is tilted backward in a position most favorable for thorough illumination by the head-mirror, and the visible portions of the lower and middle turbinate bodies, and the septum, are carefully and thoroughly brushed. The same application is made to the other nostril, when usually the relief follows, in a few moments. Should the benefit prove only partial, the 1-5000 solution may now be sprayed into both nares, and a few drops instilled into both eyes. The effect of this treatment may be expected to last for several hours. Indeed some physicians report that it is necessary to make but one thorough application daily to afford complete relief.

It is also recommended that Solution Adrenalin Chloride be administered internally in 5 to 10 drop doses, beginning ten days to two weeks prior to the expected attack. In explanation of the beneficial effect of the drug when used in this manner, the suggestion has been made that hay fever is essentially a neurosis, characterized by a local vaso-motor paralysis, affecting the blood supply of the eyes, nose, face, and pharynx and occasionally of the laryngeal and bronchial mucous membranes. Adrenalin overcomes this condition, restores the normal balance in the blood pressure, and thus aids in bringing about a cure. The profession is to be congratulated that it has at last an agent that, if not a specific, fulfills the therapeutic indications more completely and with greater satisfaction than any other remedial measure recorded in the history of medicine.

I am thoroughly satisfied with the results I obtain from the use of Peacock's Bromides. I prescribe it with much confidence, and while I have seen others, said to be "just as good," I do not tolerate them, but consider this a splendid recommendation for the preparation.

H. A. SCHRAEDER, M.D.,

Braymer, Mo.

The Charlotte Medical Journal.

VOL. XXI.

CHARLOTTE, N. C., AUGUST, 1902.

No. 2.

Some of the Recent Remedial Measures.*

By W. W. McKenzie, M. D., Salisbury, N. C.

During the past few years the general advance in therapeutics has been more marked than in previous years; and a very considerable number of new remedies or new remedial measures other than drugs have been introduced, and after due trial have been found worthy of professional confidence. It is needless to say that many others have been brought before the profession, and, after careful trial have been relegated to the list of failures or continue to be used by a limited number of practitioners who have not yet determined their exact status.

One of the newer therapeutic measures which offers considerable advantage in the treatment of grave and pressing complications is the hypodermic injection of sterilized salt solution containing gelatin, for the purpose of arresting hemorrhages which cannot be arrested by means of direct application or compression. This method, which is supposed to act by very materially increasing the coagulability of the blood, has been employed to so large extent in France, that it is there recognized as being a wise procedure, and in our own experience with it in this country it has given results which justify a continuance of its employment. It is hardly necessary to point out that these injections must be given under the strictest antiseptic precautions, both in regard to the preparation of the skin of the patient, the solution itself, and the needle and syringe with which it is administered.

The injections have apparently given good results in forming the clots in the aneurismal sacs, in arresting pulmonary hemorrhages, and in controlling others more constant but less active loss of blood.

The injection commonly employed consists of 18 grains of ordinary gelatin and 18 grains of sodium chloride in two ounces of distilled water, which should be administered with an antitoxin syringe divided into two doses of an ounce each. When aneurism is to be treated by this method, an injection every day or every other day is sufficient. "In more pressing cases where the gelatin is to be used but for a

short time, two injections may be given in the same 24 hours." (Hare.)

Urotropin.

Which is a compound containing formaldehyde, which, on being absorbed, is decomposed so that the formaldehyde is set free in the urine, exercising its powerful antiseptic influence. As a result it has proven itself of very great value in the treatment of cystitis, associated with phosphatic and alkaline urine, not only exercising a useful, permanent influence, but often giving relief after a very few doses have been taken. It has also been found by Richardson to be a valuable drug for the purpose of preventing the spread of infection by typhoid fever germs, since it so disinfects the urine of typhoid patients that the bacillus of Eberth is destroyed. I have also found it of great value in the last stages of gonorrhoea. The usual dose is from 8 to 10 grains dissolved in half tumblerful of water and taken three times a day.

Taka-Diastase.

Another remedy which is surely obtaining a very definite therapeutic rank is takadiastase, the ferment obtained by the process of Takamine, of Japan, and which is used for the treatment of those very common forms of dyspepsia occurring from faulty digestion of the starches.

This substance given in capsules alone or combined with nuxvomica or arsenic will certainly almost always give immense amount of relief.

I have found it of great value in the vomiting of pregnancy if given in five grain doses in capsules before eating, it surely will prevent, to a notable degree, the nausea and vomiting which is so annoying to the pregnant patient.

Heroin.

This is a new morphine derivative. This preparation has been introduced into medicine for the purpose of allaying cough, and is substituted for codiene. Its action in relieving cough and dyspnoea is prompt; and its ready solubility renders it peculiarly suited for hypodermic administration, especially where immediate results are required. In therapeutic doses there is no disturbance of the gastric functions. Its action on the intestines seem to be a slightly constipating one. The drug is well borne in both the young and the old. As an anodyne in

*Reac before the North Carolina Medical Society, June 10, 1902.

painful affections it ranks much below either morphine or codiene. The dose is from 1-10 to 1-8 of a grain. The incompatibilities to its use internally are alkaline and apomorphine. The results which heroin has achieved promises for it a permanent place in therapeutics.

Holocaine.

This remedy finds its chief usefulness in ophthalmologic surgery as a local anesthetic.

Special journal, devoted to the eye, have recently contained many articles in which reports have been made as to the exact sphere of usefulness of this new synthetic substance. They claim that it promises certain advantages over cocaine in that it does not cause mydriasis, and, therefore, does not tend to increase tension. It does not affect accommodation. It produces a greater degree of anesthesia of the iris than does cocaine. It relieves severe and painful inflammation which resists cocaine, and, unless swallowed or injected subcutaneously, does not produce poisoning. It is strongly antiseptic in its action, has no roughening influences on cornea. On the other hand it does not tend to control hemorrhage as does cocaine, since it does not cause primary contraction of the blood vessels. It may be employed one-half to one per cent. solution.

Acetozone.

(Benzyl-Acetyl Hyperozide.)

Since we recognize that the cause of typhoid fever is a germ (the bacillus of Eberth) and that the symptoms are due to the absorption of the toxic products of that organism, we are better able to treat the disease more scientifically, hence, the first step is to eliminate the toxine from the system and destroy them. So we first simply move the bowels by grain doses of calomel and soda every hour until from 4 to 6 grains have been taken, and then give some antiseptic. Acetozone is highly recommended by good authorities in the treatment of typhoid fever. Dr. Eugene Wasdin, Surgeon U. S. Hospital service, Buffalo, N. Y., reports twenty-seven cases of typhoid fever treated by him in which he used acetozone, and all cases recovered. He advances the theory "That the primary germ colony of this disease cannot be considered as taking place in the intestinal canal, but that the weight of evidence shows it to be normally an invasion of the respiratory tract; that the bacillus of Eberth invades the general circulation from this primary colony (typhoid sepsis) in practically all diagnosed cases; that from the blood current it may give rise to all of the well

known terminal expressions, such as the infection of the intestinal tract, the gall-bladder, the urinary bladder, the serous membrane, bone marrow, etc." His treatment of these cases consist in administering grain doses of calomel combined with one grain of aloin and two grains of guaiacol carbonate every four hours until intestinal canal was well flushed; also patient was given from 1500 to 2000 cubic centimeters of the twenty-four hour old solution of acetozone daily; the diet was milk diluted with the acetozone solution. In addition to the acetozone then administered by the mouth, the effort was made to reach the colonial area in the lung by means of forced inspiration of the atomized solution, but owing to the paresis of this area and the well known difficulty of atomizing the deeper structure it is not known that the applications were of great benefit. In some cases the acetozone was given in capsules, five grains, in sugar of milk three times daily. To meet high temperature cold sponge baths and at times the full tub. He notes that the first influence of this drug is the increased secretion of the kidneys; second influence is the very pronounced decrease of the odor of the typhoid stools which soon become odorless, and at the same time the flora of the intestines quickly become diminished, plate culture of given quantities of the digesta showing comparatively few germs to the normal. The intestinal complications are most frequently the source of the greatest danger in typhoid fever, and are the cause of the major part of the mortality of the disease and of many of the prolonged cases, therefore, if we have in this remedy an agent capable of at least partially sterilizing the intestinal canal, thus reducing the possibility of gaseous fermentations with bowel distentions and its concomitants, hemorrhage and perforation, a great advance in treatment has been gained. But we accomplish at the same time the destruction of the secondary infection of the canal by the typhoid organism, thereby averting further toxemia by absorption from the canal. Mixed infection is made materially less probable. The germicide is, therefore, to be directed against both the primary colony in the respiratory tract and the secondary expression in the alimentary canal, and he has used the solution hypodermically with benefit."

Diphtheria Antitoxine.

It is hardly necessary at this time of day to insist on the unquestionable value of the diphtheria antitoxine, the efficacy whereof has been confirmed by statistics from all parts of the world. I think that we are

satisfied that this antitoxine is a specific, but the question is asked "if it is a specific why does it not cure all cases?" The reason, I think, is (1), it is not used early enough, the streptococci having been given time to develop and produce their violent effects. Hilbert found that when a mixed culture of diphtheria bacilli and streptococci is inoculated into animals afterwards treated with antitoxine, the latter recovers from the diphtheria but succumbs to the streptococcus infection, but when the antitoxin is used early, the streptococcus is averted. (2) It is not used energetically enough, too small quantities or at too rare intervals being administered. (3) There is a proportion of patients who are susceptible to the disease that antitoxin cannot cure them, just as there are patients suffering from malaria who cannot be cured by quinine, or syphilitics who are not cured by mercurials and iodides. The dose varies with the severity of the case and the time administered. The earlier the remedy is used the more favorable are the results obtained. In mild cases where the serum is administered within 24 hours of the onset of the disease the initial dose should be not less than 1500 units and should be repeated every eight hours until most marked and decided improvement results. But in severe cases where the serum is administered in 36 hours of the onset of the disease 2500 to 3000 units should be used and repeated every seven or eight hours. In the extreme cases, especially in croup and where the treatment is not begun until after 36 hours, the dose should be from 3000 to 5000 units. In these cases, as in others, the injection should be repeated every 8 hours until recovery is assured. Dose for immunization is 500 to 1000 units.

My experience has been limited to fifteen cases, three of which were true diphtheria and the remaining twelve diphtheric laryngitis (membranous croup) of these the three true cases recovered, and three of the laryngeal type died; two of the latter tracheotomy was performed and one intubated. Of the nine recoveries only two required intubation, antitoxin was sufficient in the other seven. In all of these cases the antitoxin made by Parke, Davis & Co. was used, which is always reliable, I think.

Silva Vitelline, Iron Vitelline, Tannin Vitelline.

During the past eight years Drs. Albert C. Barnes and Herman Hille, of Philadelphia, Pa., have been engaged constantly in original research work in chemistry and experimental therapeutics in America and at the University of Wurzburg, Berlin and Heidelberg. Most of their work has been

of a purely scientific character, but nevertheless interesting to the modern physician. They call the attention of the medical profession to four new synthetic compounds produced for the first time by themselves, which, after extensive clinical test in the United States and Europe, have proven to be of more than ordinary practical value in the treatment of disease.

They claim for their silver vitellin a substitute for silver nitrate. It contains 30% of silver, twice the quantity of any silver proteid heretofore produced. The significance of this fact is apparent since the therapeutic value of a silver compound depends upon its silver content. They say, "that silver vitellin does not precipitate albumen or sodium chloride, hence it differs from silver nitrate in that it has no coagulating effect upon mucus membrane and is not chemically changed by their secretion. A further advantage of silver vitellin over silver nitrate is that the action of the latter is confined to the surface of mucus membrane whereas silver vitellin has an intensely penetrating action (without causticity or irritation) whereby the antiseptic effects of silver are exerted deep into submucous structures, when, as is well known, gonococci and other pathogenic organisms find and maintain a lodgement in spite of energetic measures to eradicate them. Clinical results indicate that silver vitellin will replace the other silver compounds in the treatment of gonorrhoea and in diseases of the eye, nose and throat. In 40 cases of gonorrhoea treated by Dr. H. M. Christian, at the University Hospital of Pennsylvania, cessation of discharge was obtained in fifteen cases within ten days although the strength of solution employed was as high as 5%. In no instance did it produce irritation, but was of distinct value from beginning in allaying inflammation, diminishing discharge, reducing the number of gonococci and shortening the duration of the disease. Dr. Swinburne, of New York, treated 66 cases of gonorrhoea at the Good Samaritan Dispensary. In 64 of these cases the unpleasant symptoms were done away with entirely; amount of discharge was markedly diminished from the start, the gonorrhoei were reduced in number, and the course of the disease shortened.

Dr. Edward Martin, Professor of Clinical Surgery University of Pennsylvania, says that this silver compound is the best that he has ever used, and further says that it is remarkably effective and absolutely non-irritating.

Iron Vitellin.

This iron they claim differentiates itself from ferratin, iron peptonates, etc., by

the fact that it is not decomposed in the stomach. Digestion of this compound with an artificial gastric juice for four hours at body temperature fails to split off even a trace of iron, hence, it cannot be astringent or irritating to the gastric mucous membrane as are the other compounds.

A summary of the results obtained thus far, indicates that the advantage of iron vitellin over Blands mass, iron peptonate, etc., consists of its more easy assimilation, its freedom from digestive disturbance, and its greater general beneficial influence upon the sign and subjective symptoms of blood impoverishment.

Tannin Vitellin.

They claim this to be an intestinal antiseptic and astringent.

Clinicians have availed themselves of the use of this drug in cases of typhoid fever because it sterilizes the urine to the extent of complete disappearance of typhoid bacilli from that fluid.

The essential feature of this compound, they claim, is that it so combines a nontoxic antiseptic and astringent that the compound is influenced by the gastric juice, but is gradually split up into its components as it passes downward through the intestines; hence, it cannot disturb the stomach, and it exercises antiseptic and astringent properties in the lower part of the intestinal canal.

This remedy has proven of marked value in a large series of cases of acute catarrhal enteritis, chronic diarrhoea due to lesions in both the small and large intestines and in infantile diarrhoea it produced prompt cessation of bowel movement and relief from symptoms of inflammation. The field of application of this compound is typhoid fever and inflammatory diseases of the intestines associated with diarrhoea and the symptoms of autointoxication dependent upon intestinal putrefaction.

These gentlemen have also discovered a new dry surgical dressing, which is pink, impalpable, odorless, tasteless and insoluble powder containing 45% of bismuth, 15% of iodine and 3% of formaldehyde in definite chemic combinations. The effect of this compound on wounds is antiseptic, astringent, dessicating and granulative producing. These gentlemen are reliable and I think that they have done a great and good work for the medical profession as well as the sufferers of the disease in which these remedies are indicated, and I think these compound are entitled to official recognition in the Pharmacopocia.

Uric Acid Excess.*

By D. J. Hill, M.D., Lexington, N. C.

Many diseases, not to mention a multitude of symptoms, of heretofore unknown pathology which come before the general practitioner for treatment are now recognized as some one of the manifold manifestations of uric acid excess. While I am not prepared to go to the extent that Haig does in attributing a very large proportion of chronic diseases to this one cause, it must be admitted that the condition often gives rise to many distressing symptoms, and in some cases occasions incurable organic lesions. Most writers on this subject teach that there is perhaps never an excessive formation of uric acid at a time and that its accumulation in the blood and body at any time is due to retention or failure of excretion. If we accept this as true (and we must, after studying the extended scientific researches of the most distinguished authors), we are forced to the belief that indigestion, especially of the intestinal variety, has a wonderful influence in checking the elimination of uric acid or else rendering pathologically active that which is otherwise latent in the system, or in some way interfering with that normal ratio of the uric acid to the urates (1 to 35 I believe as given by Haig) which is so essential to health and happiness.

Dr. W. Gilman Thompson asserts that "the dyspepsia of lithaemia is in part a conservative process, checking digestion and absorption, whereas predigested foods are much more promptly conveyed to the overburdened liver or overloaded blood." This can apply only to those cases in which nitrogenous material is taken in excess of the individual needs; and certainly no rational physician would force nature to save his patient from one pathological condition, by interposing another, when the remedy is so simple as that of withholding the protieds.

Indigestion plays a grater role as a causative factor in the production of those symptoms attributed to excess of uric acid than is generally believed. Many express the opinion that indigestion is a result of excess of uric acid. Clearly to my mind they have the "cart before the horse," it is a cause rather than a result of the trouble. Either may aggravate the other, but the indigestion is the primary cause. The lithaemic manifestation so often attributed to disturbance of the nervous system are primarily due to interference with normal digestion; or rather, the nerv-

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ous strain, worry, or anxiety from any cause, gives rise to indigestion, and that in turn to gout or rheumatism. Do not understand me to mean that imperfect digestion of ordinary products in those not predisposed to lithaemia would give rise to such trouble, but it is the breaking down of some special nitrogenous substance that occasions the distressing symptoms. We have all noted attacks of gout, rheumatism, migraine, hay asthma, or some one of the protein phases of disease resulting from excess of uric acid, coming on immediately after an attack of acute indigestion whether the result of improper diet, nervous strain, anxiety or other cause. A patron of ours has been in the habit of eating strawberries every spring, and at once suffers *indigestion*, diarrhoea, dysentery, and rheumatism, coming on as certainly as the berries are eaten, and in such regular order that it cannot mean other than cause and effect.

Another man, who has suffered greatly from rheumatism for the past ten years comes occasionally to our office and asks for some of the "same medicine for rheumatism." If he comes early in the attack before there is too much involvement of the joints, we give him a brisk purge, and follow with dermatol gr. x, 3 times a day after eating; no anti-rheumatic medicine at all as you see, but the attack is aborted; he experiences prompt and perfect relief. For the past two years we have kept him supplied with dermatol, which by the way is one of the very best remedies for intestinal indigestion and fermentation, and which he takes whenever the pains in his joints remind him that he needs it, with the result that he almost never loses any time from business. Of all the causes of lithaemia we are taught to believe that improper diet is the most fruitful. But the laboring classes live largely on meats and leguminous vegetables—just the diet most productive of uric acid; yet these people are singularly free from lithemia. Why is this? They take plenty of out-door exercise, they have no nervous strain, worry or anxiety—nothing to interfere with normal digestion and hence they are free from this train of distressing symptoms.

Perfect digestion of protied substances makes urates; imperfect digestion of the same material makes uric acid. This, in a general way. Of course excessive amount of such food in any case will almost surely, sooner or later give rise to disease. In seeking the relief of lithaemic patients, diet and other hygienic measures demand our first attention. The diet should be carefully regulated, and this consists essentially in eschewing all nitrogenous or albuminous articles such as meats, eggs, etc.,

along with the leguminous vegetables, which are known to increase the tendency to excess of uric acid. This should be done in no half-hearted way, but they should be excluded entirely from the dietary of those whose condition is such as to admit it. Avoid tea and coffee; tea is worse than coffee.

Take starch foods and sweets sparingly. Give milk and butter, the succulent vegetables and fruit, remembering that acid fruits, strawberries, acid oranges and lemons sometimes give trouble. Give water in abundance, before meals. Keep the skin clean, and the skin and kidneys active; promote digestion; prevent fermentation in the stomach and bowels; keep the bowels active; and to accomplish this I give cascara evacuant x to xv gts. in water before meals and gr. x demators after meals when there is fermentative dyspepsia. Supplement the action of the cascara by the use of Mag. Sulph. every morning before breakfast when needed. Keep the urine alkaline or neutral by the use of the potash salt, the acetate, citrate, or bicarbonate, which ever is most acceptable to the stomach. This is supposed to lessen tendency to heart complications, in addition to aiding in the elimination of uric acid. To alleviate the pains, and at the same time hasten the elimination of uric acid, Salicylate of soda is one of the most reliable remedies. To those who bear it well, as much as 80 gr. or 100 gr. a day should be given, in divided doses, and it will be found that an opiate is rarely necessary. If however, the pain be excessive, morphia hypodermatically, or tr. opii diol., or liq. dov. in appropriate doses by the mouth may be given.

I have attempted only to refer in brief to some of the more interesting phases of this subject, hoping by so doing to evoke discussion. If I have succeeded my object is accomplished.

Prenatal Influence.†

By Annie L. Alexander, M.D., Charlotte, N. C.

Mr. President and gentlemen of the Charlotte Medical Society.

My subject to-night, Prenatal Influence or Heredity, was suggested to me by a small boy who is a marked illustration of the subject.

I offer no apology for bringing this seemingly theoretical subject before you. To many it is purely theoretical. To the far seeing it is practical. To the laity it means little. To the professional man or

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woman, who has the well-being and up-building of the race at heart, it is of great importance, and as teachers we should make use of our opportunities to instruct the laity along these lines.

Prenatal influence has been recognized through all ages. We are told in sacred writing about it, how Jacob, by putting white and streaked rods in the watering places of the cattle, influenced them to bring forth spotted and streaked young; and how the sins of fathers are visited upon the children.

People ignore these facts in nature. They are ignorant of the influence parents exert for weal or woe on the unborn child. At the same time they believe more strongly in maternal impressions, especially those made by fright or the sight of horrible objects, than the profession.

The mother will in every instance of physical deformity recall the impression made upon her by some unpleasant experience. And whether we really believe these things or not all of us can recall instances that seem incontrovertable.

If women understood these things they would think well before they take on themselves the duties of wife and mother. Unwilling mothers are responsible for more ills in the world than they dream of. Women make or mar the character of their offspring by the thoughts they entertain during the prenatal existence. A child's disposition is influenced by the state of mind the mother is in before its birth. An illustration is the boy whose disposition suggested this subject to me. Between the 4th and 5th months of his prenatal existence, his mother had the misfortune to have her baby so horribly burned that he died four weeks later from the effects. She became morbid, deeply melancholy. For months she never spoke except when she was asked a question and never smiled. This little fellow was beautiful but sad-looking beyond expression; the same melancholy eyes as the mother. He would sit for an hour or more where the nurse would put him, never laughed nor played as other babies and was a pitiful counterpart of his mother. Has never been robust. Until he was 7 or 8 years old he was prone to convulsions; a temperature of 102 to 103 deg. if continued for an hour or so, would throw him into spasms. The family learned to prevent these spasms by keeping the temperature down by constant bathing. He is now 12 years of age, small and delicate, but remarkably bright mentally. Life is a burden to him because of his melancholy temperament.

You know the reputation ancient Greece had in her beautiful cultured men and

women. In Greece a woman who was to become a mother was guarded from every annoyance, she was honored above all other women, her husband and all men regarded her as a holy being, chosen by God as a messenger from Heaven. She was surrounded by beautiful objects, music, literature, and lived in an atmosphere of love and homage. It was by this means that the Greeks were the most beautiful people in the world; not only were they the most beautiful but they were the greatest people of their time. After awhile men failed in this homage, and Greece fell, and her glory became a thing of the past. There is an old myth that the soul of a man who maltreats a woman during this sacred time goes into the body of an owl when he dies.

Every wrong impulse, unkind thought, or deed should be guarded against during this time. Every woman cannot listen to sweet music nor look at beautiful objects, nor be surrounded by an atmosphere such as the ancient Greeks lived in, but unselfishness and thoughtfulness for her unborn child should fill every mother's heart. The mother's impulses for good or evil are implanted in her child. Many of our criminals are the results of a mother's attempt to destroy her unborn child. Murderous impulses are implanted in the little brain and some day blossom into crime. Many unruly son or daughter could lay the blame at their mothers' door.

Heredity and environment are two great factors in an individual's life and as individuals made a nation the question is being agitated as to the advisability of controlling heredity by law, restricting the marriage of persons who will transmit to posterity their physical, moral and mental deficiencies. The time is not yet ripe for restricting marriage by legislation, but every man and woman considering marriage should look well to the physical, mental and moral status of the chosen one; not only the chosen one, but his or her ancestors. A child is a composite of what its ancestors have been, and what its parents are.

The sentimental side of marriage should appeal strongly to every woman for "there is nothing half so sweet in life as love's young dream," but the thought of obtaining happiness at the expense of those who come after her should make her pause.

In times passed, what was termed "Divine Providence" was held responsible for the superiority of the offspring, but now we know that the bringing into existence of the blind, lame and halt, mentally, morally and physically, cannot be laid at the door of Providence. The marriage of two people, one or both of whom have a heritage of physical ills or moral obliquity,

must by natural law result in a crime against progeny. As the Bible states one cannot gather "figs of thistles."

Dr. Chase in his book on *The Responsibility of Sex* says: "If we could be born right the first time, the difficulty of being born again would be materially lessened." He further says: "Any one knowingly possessed of contaminated blood, to enter the parental relation is guilty of a crime. The crime is two fold: first, it is a crime against the offspring of such wedlock. The wrong inflicted smite the defenseless, the poison scattered corrupts the innocent. Second, the crime is against the race. Its infancy is its weakness, its maturity is frailty, its old age is disease."

It is a child's right to be well born. It is a crime against the child to deprive it of its birth-right—health. No parental care after birth can ever make up to a child for the sins committed against it by forcing it into existence unasked, to suffer the penalties of broken laws. Emerson says: "A man is what his mother made him."

The laws of nature, God's laws, are perfect, and the bringing into the world of imperfects, degenerates, imbeciles drunkards and diseased is a crime against the child, the home, and the nation. A crime which no woman with the heart and instincts of mother love will knowingly commit.

We might learn something from stock raisers. In the human family we see none of the precautions taken by them. The greatest governing factor in the human family are passion, fancy and fortune, either of which will outweigh physical or mental considerations. The consumptive, nervous, vicious and so on through the whole category of inheritable ills, intermediary until we have degenerated into a nation of neurotics and dyspeptics, inferior in stature and endurance. The marrying and intermarrying of such people will affect a nation. It is said from this cause more than any other "The descendants of Julius Caesar have degenerated into banana sellers, those of Demosthenese into candy venders, of our streets and those of the Mighty More are relegated to the deserts of Africa."

Many hold that environment is a more important factor in an individual's life than heredity. Perhaps it is as great; but the parents of whom a child is born is of telling value. His body and mind inherit a predisposition toward certain conditions and environment will be an obstacle to retard or a means to carry him on. He is born a mass of helpless possibilities.

Openheim says: "Repeated impressions on the brain tend to create a permanent

condition." Tearing down and building up of brain cells, over and over again, form a fixed habit. Thus environment is important in overcoming the evil inflicted by bad birth. But to repeat from Dr. Chase, "If we could be born right the first time, the difficulty of being born again would be materially lessened."

I will read you what the late Robt. G. Ingersol said on this subject. His thoughts are among the best and purest. He said:

"For thousands of years men and women have been trying to reform the world. They have created gods and devils, heavens and hells; they have written sacred books, performed miracles, built cathedrals and dungeons; they crowned kings and queens; they tormented and imprisoned, flayed alive and burned; they preached and prayed; they have tried promises and threats; they have coaxed and persuaded; they have exhorted and taught, and in countless ways have endeavored to make people honest, temperate, industrious and virtuous; they they have built hospitals and asylums, universities and schools, and seemed to have done their best to make mankind better and happier, and yet they have not succeeded."

Why have the reformers failed? I will tell you why. Ignorance and vice are populating the world. The gutter is a nursery. People unable to support themselves fill the tenements, the huts and hovels with children. They depend on the Lord, on luck and charity. They are not intelligent enough to think about consequences or to feel responsibility. At the same time they do not want children, because a child is a curse, a curse to them and to itself. The babe is not welcome because it is a burden. These unwelcome children fill the jails and prisons, the asylums and hospitals and they crowd the scaffolds. A few are rescued by chance or charity, but the great majority are failures. * * * They live by fraud and violence and bequeath their vices to their children.

Against this inundation of vice, the forces of reform are helpless, and charity itself becomes an unconscious promoter of crime.

The real question is: can we prevent the ignorant, the poor and the vicious from filling the world with children?

Must the world remain the victim of ignorant passion?

Can the world be civilized to that degree, that consequences will be taken into consideration by all?

Why should men and women have children that they cannot take care of, children that are burdens and curses? Why? Be-

cause they have more passion than conscience, more passion than reason!

You cannot reform these people with tracts and talk. * * *

Criminals, tramps, beggars and failures are increasing every day. The prisons, jails, poor houses and asylums are crowded. * * * Law can punish, but it can neither reform criminals nor prevent crime. * * * There is but one hope. Ignorance, vice and poverty must stop populating the world. This cannot be done by moral suasion; this cannot be done by religion or by law, by priest or hangman; this cannot be done by force, physical or moral.

To accomplish this there is but one way. Science must make woman the owner, the mistress of herself. Science, the only possible savior of mankind, must put it in the power of woman to decide for herself whether she will or will not become a mother. This is a solution of the whole question. This frees woman. The babes that are born then will be welcome. They will be clasped by glad hands to happy hearts. They will fill homes with light and joy. Men and women who believe that slaves are purer, truer than the free, who believe that fear is a safer guide than knowledge, that only those are really good who obey the commands of others and that ignorance is the soil in which the perfect perfumed flower of virtue grows, will, with protesting hands, hide their shocked faces.

Men and women who think that light is the enemy of virtue, that purity dwells in darkness, that it is dangerous for human beings to know themselves and the facts in Nature that affects their well being, will be horrified at the thought of making intelligence the master of passion. But look forward to the time when men and women by reason of their knowledge of consequences, of the morality born of intelligence will refuse to perpetrate, disease and pain, will refuse to fill the world with failures.

When that time comes the prison walls will fall, the dungeons will be flooded with light and the shadow of the scaffold will cease to curse the earth. Poverty and crime will be childless. The withered hands of want will be stretched for alms. They will be dust. The whole world will be intelligent, virtuous and free."

Should the State Extend Her Public Charities?*

By S. E. Koonce, M.D., Pollocksville, N. C.

Our entire State is at this time more or

less agitated over the condition and needs of our poor. Religious and charitable societies are establishing more institutions and increasing donations to those existing. Contributions to the press constantly urge the need of reformatories for youthful criminals, hospitals for inebriates and tuberculous, and provision for idiots. Boards of public charities report imperfect accommodations for paupers in several counties. Superintendents of penal institutions and insane hospitals demand increased appropriations for the support and the protection of those who are or ought to be under their charge.

Now, while it may be as difficult for a country doctor to perform a laparotomy, unassisted, as it is for him to treat a scientific subject in such a manner as to command the attention of a body of scientific men, such as compose the North Carolina Medical Society, he occasionally has to enter his mind a thought which is interesting to himself if not to others, and which he did not collate from a few periodicals and textbooks. Accordingly, there can be found in every community sufferers of various natures, about whom nothing is said and for whom nothing is done, except what is done for their temporary relief by physicians of each respective locality.

This class of patients, afflicted with disease or injury, amenable to or capable of being benefitted by treatment, not necessarily paupers, but too poor to obtain relief, are, no doubt, more frequently found in rural districts and in towns deprived of proper hospitals. Some of them are uncomplaining, live a life of pain and die unnoticed by any but a few friends; others make themselves notorious and become a nuisance to every doctor within their reach, and finally succumb to a contracted opium or whisky habit.

Without depreciating a dollar expended for other worthy or worthier objects, notwithstanding deficits in annual appropriations, and in spite of the clamor of politicians for greater economy, the questions arise: What can be done for such? Is it the duty of the medical profession individually to care for them; and is the ordinary physician able to take the time from attendance upon those upon whom his living depends to properly treat these patients free of charge? If the above be answered in the negative, is it not the duty of the State, without taking anything from the old soldier, the blind, our orphan children or the insane, to open her heart, to erect at some accessible point a State hospital well equipped and well managed, and to provide means whereby those deserving it may receive necessary treatment?

*Read before the North Carolina Medical Society, June 10, 1902.

How much North Carolina is behind her sister States in such provision needs no comment. Wilmington, Raleigh, Charlotte, Asheville, Durham, and perhaps others of the larger towns possess small hospitals more or less adequate to their own needs; but of what avail are they to the great body of our people?

The average country doctor, no matter how narrow his views nor how mean and sordid his disposition, of necessity contributes as much to charity in proportion to his means as a Duke or a Carr. Public opinion and the least spark of human sympathy compel him to attend all in immediate danger. The more chronic cases he is forced to overlook. Is it, then, a wonder, that in the woods, upon the mountains, and even in the outskirts of the towns are found women with lacerations of perineum and cervix, benign and malignant tumors of uterus or breast, men with operable hernia or carious bone, and children with deformities which might have been corrected?

The saving to the State of money annually carried to the hospitals of other States, the value to the profession as a whole, and how near self-supporting such an institution might become, is intentionally omitted; nor is there need of suggestion here about how the fund necessary to the erection of a State hospital should be raised, whether by State or private or combined State and private charity. Suffice it to say, it is a reflection upon the reputation of North Carolina that she has no such institution existing, and is a greater reflection, if in this age of manufacturing and railroad enterprise and increase in public revenues, none such can be provided.

As all efforts towards public improvements, whether successful or unsuccessful, must have a beginning, where can be found a more suitable starting for the discussion of a medical feature of our public charities than in an assemblage of the representative men of the medical profession? Politicians, of course, having their political heads to care for, require a strong stimulus before they can be persuaded to put their hands in the public treasury even for public benefit.

It is understood that there has been organized in our Capitol City a faculty for the establishment of a medical college. What means their faculty have for the erection of necessary building and hospital has not been generally announced, but this much can be said: They must depend chiefly upon the young men of our own State to fill their lecture halls, and having no large city for support, upon material from the country and neighboring towns

for their clinics. The medical profession will send neither to this school nor patients to their clinics unless a hospital sufficient for all demands be provided, whether by their own endeavor or by State aid.

Finally, let this query merit the attention of this body or pass unnoticed, as it deserves. If of importance, may some man or body of men in the name of God and humanity present its consideration to the next General Assembly; if a trivial and useless discussion, only a few valuable moments of this society have been wasted and the wastebasket is large enough for unnecessary papers.

The Imperative Call of Our Present to Our Future.*

By Martin W. Barr, M. D., Chief
Physician of Penna. Training
School for Feeble-Minded
Children, Elwyn, Penna.

In this year of 1902 we pass the new century threshold of our work and looking backward through the maze of time since first Itard led his "Victor" before the world of science, we mark in each decade a continuous advance in all lands; an advance in which America has been by no means a laggard.

Without pausing to review historical detail, in itself a most interesting chapter, it behooves us here in conference to consider what are the urgent demands which the experience of the past coupled with the needs of the present makes of our future.

While not forgetting that we owe our position of to-day to the struggles of both nations and individuals separated and detached from one another in the past century let us not fail to accept "Togetherness" as the watchword of the coming century. Indeed, did not the very creation of this association embody such a thought? And surely we have grown in twenty-six years to such maturity as to warrant the propriety of calling to our confreres to come and help us. Numerous communications received from these lead me to consider more and more how in the multitude of counselors there may be wisdom, and to arrive at the conviction that could we here unite in, and give out to the world, an authoritative statement and opinion as to the paramount needs of our work, we might evoke a similar expression from other countries, and thus materially accelerate a second advance along new lines.

*Read before the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons, Fort Wayne, Indiana, May 26th, 1902.

As one by one our institutions become patriarchal, having received successive generations of defectives, we find growing upon the pages of their reports a clearly implied interrogation: "We have trained for—what?"

Without formal expression emanating from our association as a body there is yet, I believe, a consensus that abandons the hope long cherished of a return of the imbecile to the world.

Now if this conviction arrived at through long experience and much disappointment involves principles affecting the progress of our work and the welfare of children and of society, ought we to be backward in declaring it? And in failing to do so, do we not rather underestimate the value of our association to science and to the world at large? If we do not speak authoritatively upon the subject who shall? And how then are legislators and others to be enlightened as to the futility of hopes which the very progress of our work has tended to foster? Indeed I think we need to write it very large, in characters that he who runs may read, to convince the world that by permanent separation only is the imbecile to be safe-guarded from certain deterioration and society from depredation, contamination and increase of a pernicious element.

That men are ready to hear, ready to heed, is evidenced by the repeated calls upon all of us for information and for expert opinion, but the opinion of one man certainly goes farther when sustained and endorsed by his colleagues. To affirm this, therefore, as a fact touching most intimately the welfare of society, the defective, and our relations toward each, I claim to be our first care and obligation, nor should we neglect any opportunity to urge this result of our experience upon the notice of any and every properly constituted authority.

The establishment by the public school system of special classes for backward children is yet another proof that the time is ripe for concerted action. Our work—a silent object lesson—has taught the necessity of special methods tested and proven a success, and the educational world is in this simply following our indications. Already from these classes comes a sifting out, which sends to us a class needing prolonged training, firmer control and regular occupation under insistent supervision; at the same time the pressure for the admission of untrainables is increasing rather than diminishing.

Here is our second call to stand and declare! A training school should not be called upon any longer to accept untrainables.

Our methods, advancing from those adapted only to improvement and self-help of the idiot, have established industries which provide not only the needed occupation for this new class coming to us, but which may, if properly protected, aid largely in maintenance. But this protection to be effectual should include two vital points: A release from the burden of untrainables, whose care heretofore an object, now absorbs much valuable time of both employees and trained pupils which might bring in a better return, while separate asylums for idiots could be run on a much more economical basis. This on one hand—on the other the industries themselves demand the protection of a certain form of apprenticeship preventing the withdrawal of one set of trained workers until at last another set be ready to carry them forward. Not only for the industry, but for the child is this protection essential. When we consider how large a proportion of children in the primary schools drop out for work before reaching the grammar school, we can readily understand how parents and guardians fail to realize that the period required for the training of an abnormal is four times that for a normal child; and this ignorance joined to the pressing necessity of contributing to the support of the family often withdraws a child who has just entered upon what can prove his life work after years of persistent compelling force, without which disappointment to the home, to the child and to the work is inevitable. Various charitable associations are likewise eager to exchange and refill their quota from the many crowding their lists, so that hardly is an industry well started before it suffers from loss of operatives.

As this is an experience doubtless common to all, it surely requires consultation, co-operation and united action in formulating and outlining some plan of defense for the common good.

Might not a long apprenticeship coupled with increased privileges upon attaining a certain standard tend to adjust naturally the question of permanent sequestration?

Once settled and interested in his work with a little more freedom than the children of the school, the imbecile is satisfied and contented—a certain self-hood is attained and the institution becomes his home; indeed, we have had many pathetic appeals

for return from those withdrawn. Without this there is an ever ruling spirit of discontent—or may we not better recognize it as a natural longing for the beyond—different from the *wander lust* in our runaways, which reveals itself in our trained boys and girls who seek to leave us in a legitimate way to make their own way in the world.

I presume in this all of us have the same discouraging experience! The few succeed where carefully placed under the regular surveillance and rule they have been accustomed to. A young fellow in military service, and a young girl as nurse in a hospital are with us notable exceptions in a long list of more than failures, where vice, crime and marriage or illicit connections fast swell the census roll of abnormality. Still to all of us who are in touch with young life the gratification of this normal yearning becomes a serious and ever present problem—a problem that is sure to become more perplexing in the future should the supply of trained workers begin to exceed the demands of the institution.

The separation of the sexes is another problem which experience is slowly defining. At Elwyn teachers are a unit in declaring there is nothing gained in co-education even in convenience while nerve strain in disciplining is greatly increased, and arrangement of classes according to sex rather than grade is already deemed advisable.

From the fact that such a separation has become a necessity in school, custodial and cottage systems, superseded only by eternal vigilance in those industrial departments where the sexes are brought together—and statistics showing a steady increase of defective element—there has come to be a growing conviction in many minds that “diseases desperate grown by desperate applicances are relieved or not at all,” and that the whole matter might be simplified and the nervous atmosphere relieved, by early invoking the aid of surgical interference to secure at once safety to society, less tension to community life, and greater liberality, therefore greater happiness, to the individual. This has taken distinct form in an effort on the part of several members of my own board (whom I accompanied to Harrisburg last winter) to seek legislative authorization for the asexualization upon admission to institutions of those adjudged mentally and morally defective. The bill, which passed both houses, was finally lost through the timidity of the Governor. We feel, however, that the step is a gain in that the attention of legislators has been called to the need of some measure to check the alarming increase of imbecility, and later the need may become more strongly evidenced in the development and evolution

of the colony system, the foundation of which has been the culminating work of our nineteenth century history.

This the natural outcome of the work must form the only natural relief from overcrowded conditions, and in satisfying the craving for change of environment would offer greater variety and greater stimulus in maintaining the standard attained during the period of training. In this Massachusetts holds her own Waltham celebrating most fittingly its half century by entering upon a new endeavor in establishing a colony for her trained children. While this is an example challenging our emulation, again recurs the suggestion that united effort for a common end might accomplish more. The states may not be ready to respond to calls for many colonies, nor the institutions yet ready to supply them, but the National Government might heed a proposition from us for one which would serve as an outlet for all.

An ideal spot might be found—either on one of the newly acquired islands, the unoccupied lands of the Atlantic seaboard, or the far west which, under proper regulations, could be made a true haven of irresponsibility, and deriving its population as it would from the trained workers from the institutions throughout the country, might become in time almost if not entirely self-sustaining.

The new century finds us then at a parting of ways where new fields open before us. Cutting loose from early traditions, we need to build upon the experience which has demonstrated the impossibility of training for the idiot, by claiming from society immunity from that burden while untrammled we employ our energies to getting best results in building up a self-sustaining factor out of the improvable imbecile, and address ourselves to the task of weeding the garden of humanity from the tares which a highly nervous age has sown broadcast; not only weeding out but garnering, so safely that no untoward accident or chance may scatter seed that can produce only imperfection and ill.

Some definition of our position, and of our obligations as guardians for defectives and defenders of society which they threaten would, it seems to me, come with singular appropriateness just at this juncture; forming an authoritative basis for private judgment and expert opinion as also solid grounds for appeals for legislative aid, it would discharge at once our obligation to the past and also the future, in preparing the way for those who shall enter into our labors.

So-Called Dyspepsia.*

By Charles Adrien Julian, M.D., Thomasville, N. C.

In preparing this article, I feel that I am performing a task of failures and an apology is required of me for attempting a subject the elucidation of which would require a collection of stolen things that would baffle the ingenuity of the most commendable plagiarist. The title is more to "tickle the itch of the ears than to satisfy the appetite of the soul." I will confine myself to an effort to satirize the subject, depict the condition of gluttony, encourage continency, abstinence and temperance, and review what I consider the most rational treatment.

It is always essential before the delineation of any subject to have an exact idea of what it indicates, but this is confounded with so many terms that the interpretation would disturb the equilibrium of a man whose stomach was neither acid nor alkaline. There has been as much confusion and empiricism in the treatment as in the name. If I could clear away whatever mistiness may have accumulated with time about them and present to your mental vision fresh truths clothed in naturalness, if I could in any degree succeed, I would feel that I was answering a purpose that has long lain unperformed. It is a matter of general experience that disorder of the digestive organs is frequently occasioned by defects in the quality of the food. Hard and coarse foods overtask the digestive powers, irritate the mucus surface of the stomach and bowels and leads to torpor. The chemical composition of a food is not always a safe criterion for estimating its value. Its digestibility must always be taken into consideration, as the physical characters may render it liable to disorder digestion. In tracing out the causation of disease we find in not a few instances that excess is the disturbing element instead of quality.

The man who eats greedily, of course the pleasure of indulgence is the sole object and there are people who have a voracious desire for food, who yet are but atrophies and living skeletons, who devour not that they may digest and grow strong, but gratify and please themselves. Then comes the sin of gluttony, the same food when partaken of moderately is wholesome that becomes dangerous when used to excess. I have been tempted in some instances to supply the cud and endow them with the genuine faculty of rumination. The man who wrote that he had a wife, three children and six cows to feed doubtless took the same view. We must have sufficient food to carry on the bodily functions, and maintain life—the appropriation of good food lays up

heat and energy in the time of need—and makes brawn and brain. The hygiene of the alimentary system is faulty in nine cases out of ten, and the stomach is bloated and distended by excessive eating and drinking, hence dilatation the factor which predominates in dyspepsia. No food should be introduced into the stomach when any part of a preceding meal is there, nor should the meal be hurried or the thorough mastication be neglected, for the very finest division of food is indispensable for its digestion. Imperfectly masticated food is not only a mechanical irritant but remains unnecessarily long in the stomach and undergoes fermentation with all manner of attending disagreeable symptoms, epigastric uneasiness, fullness, pain, eructation of foul gasses, &c. The ingesta that remains in the stomach is like water that stagnates in the pond or reservoir, soon becomes foul. When food remains in the stomach five hours after ingestion it is pathological, and if it remains six hours anomalous fermentation occurs and after the seventh hour the alimentary residue will undergo exclusively acid or putrid fermentation. In this putrid condition the mucous membrane becomes corroded, nervous symptoms appear—there are manifestations of dyspnoea—cutaneous and renal disease and breaking sensations in the muscles and joints. In these fermentative or putrefactive alterations minute organisms grow and multiply, taking up from the living animal material for their sustenance, thus robbing their host of that upon which his tissue must subsist and they in turn produce various excretory substances which are extremely poisonous to the animal organism which entertains them. Stop and consider the importance of the digestive tube. Everything except oxygen is introduced into the organism through it and before introducing the food it must elaborate it, Poor thing, how badly some people abuse and over-tax it. Outside of the underlying relationship with diseased states of other parts of the body it is seldom that the stomach is at fault, but the man who is stuffing it. The stomach sounds the alarm, but the poor, ignorant fool who feels a little tenderness about his epigastrium, who is a victim of gastralgia, who is emaciated and weak and sucks in wind and belches it out like a graduated cribber, whose skin is livid and dry, extremities cold and disposition morbid, goes to his medical adviser and gets him to prescribe an appetizer and stuffs it still, producing in its empetuous current, such an assemblage of morbid feelings that life often becomes a wearisome burden and its endurance beyond the power of reason to sustain. To

observe temperance in diet and drink are the most essential correctives. Only those things which are directed to the purposes of nourishment and growth, and the support of the bodily functions should be provided. I would like to pay my respects to the subject of improperly prepared food for about one hour and a quarter. I would like to picture the ten by twelve biscuits, that have a crust above and a crust below and a pound of dough between, the ham that is served in a deep soup tureen with a quart of a-la-grese, the seeds, the rinds and husks that give you those griping pains and are thrown off as they are swallowed. This is the picture of the ignorant, but oh, for those a-la-mode. The chafing dish party presided over by a woman who learned her art at a cooking school, who can make you a Welch rarebit or a finscassed omelet that will keep you company into the wee hours of the morning, those mayonnaised salads and meat croquets that will cause you to see the spirit of your great grand sire, the frozen puddings, the develed eggs and all the other develed dishes that destroy the capacity of the stomach to digest and the integrity of the tongue to pronounce their names. We must attribute a great many other things in the pathogenesis, but that would lead to a very scientific paper on remote as well as direct causes.

The introduction of the stomach tube and a chemical analysis of the stomach contents are the only means of determining the different forms of this disease and a correct understanding of this is necessary for successful treatment. The treatment of a functional ailment or a structural alteration certainly requires a cursory knowledge at least of the anatomical alteration. In as solution or a total acidity of fifty-two (52) certaining the secretory condition of the stomach the gastric contents are best examined after a test meal. I had in mind the clinical examination of cases before

you, the introduction of the tube and the chemical analysis of the stomach contents and a request for prescriptions for the cases I found it impossible to bring the cases here. The tests I use are as follows: Total acidity. Take ten c.c. of filtered stomach contents and an equal part of neutral water, add two drops Phenolphthalein and titrate with a decinormal N. A. O. H. solution until a ruby red color appears, which indicates the contents have been neutralized.

Calculation: If for ten c.c. of stomach contents it requires 5.2 c.c. of decinormal soda solution, to neutralize one hundred c.c. of stomach contents it will require as many times 5.2 c.c. of decinormal solution as ten is contained in one hundred, or ten times 5.2 c.c. or 52 c.c. of decinormal points. In like manner I test for free Hcl., using Dimethyl as an indicator.

Next test for all acids, and acid salts, (except the acid combined in the process of digestion) by using alizarine as an indicator and to find the combined acid you must subtract the amount of all the acids and acid salts from the total acidity. Fermentative or fatty acids equals the difference between the free Hcl. and all the acids except the combined period. Test for rennet by adding five drops of the stomach contents to some fresh milk and keep it temperature of body for fifteen minutes. Test for Pepsin by adding cooked egg to stomach contents in warm place two hours. Pepsin is never absent if Hcl. is present.

In ordinary cases where no chemical analysis is made I insist upon a rigid dietary and a thorough system of purgation, but where an analysis is made I follow the following scheme:

Of course the treatment must be based on the history of the case as well as from a scientific investigation. Five out of every ten physicians combine Pepsin with every prescription regardless of indi-

Anacidity.	{	Dietetic.	{	Bland non-irritating, more starches than meat.
		Lavage.	{	Until it will empty itself in five hours.
Treatment.	{	Medicine.	{	Large doses of Hcl. and bitter tonic.
Sub-acidity.	{	Same as above, except small doses Hcl. and more meat in the		
Treatment.	{	Diet.		
Sub-acidity	{	Same as above plus Resorcin, gr. γ . Salol, iiss an hour before each		
with fermentat'n	{	meal.		
Low grade	{	Keep bowels regular and use up Hcl. by four or five small meals		
Hyperacidity.	{	in the 24 hours composed principally of meat.		
High grade	{	Same as above plus an antacid.		
Hyperacidity	{			
High grade plus	{	Same as above plus an antacid. Resorcin, Salol and Strychnia		
dilatation and	{	and Lavage 5 hours after principal meal.		
fermentation.	{			

cation. There are firms who perceive the spirit of the times and present to us incongruous monstrosities in the way of quick and ready combinations. Treatment is constantly changing its character according to the style of those ambitious minds that guide our opinions and fill our fancy. Some wizard is always scattering his enchantments, trying to seize us with every prevailing idea and subduing us to his own purpose with new combinations that arise for a moment to reflect any light and then sink again into a dark eternity.

Hygiene of Puberty in Female.

By W. B. Anderson M. D., Nashville, Tenn.

By hygiene of puberty in the female we mean efforts brought about to bear upon the conduct and environment of girls just developing into womanhood. Puberty is just the beginning or gateway, opening into a woman's life of many sexual ordeals, namely: menstruation, copulation and parturition; and as there is an end to all things, so menopause closes the gate as it were, to her life of generation.

Puberty is physiological, if dealt with under physiological circumstances. A girl just entering her teens, frail and delicate in structure, blissfully ignorant in her childish innocence, satisfied to play with her rag doll and stick horses, begins to lose her childish ways, and her blissful ignorance becomes a painful consciousness of the fact that she is something else than a child. Her hearty laugh becomes a suppressed and bashful smile, her dolls and hobby horses vanish into air castles of what she will do when she becomes a woman, her breast begins to develop and add a beautiful contour to her delicate form, and she is painfully conscious for the first time in life, that her dress is three or four inches too short to hide her calves, which are now developing rapidly. Hair begins to grow upon her pubis, which the passionate Venus spoke of as the "Mount of Love." Suddenly she is seized with a peculiar feeling, which she cannot explain, and there is a slightly colored discharge exuding from her vagina, thus announcing the first appearance of her menstrual sickness.

Now this is physiological and seems to be of little importance, but it is not always so favorably met with. We may see many such cases, and then occasionally see one presenting quite a different picture. A rosy cheeked little girl, happily advancing in her school work, approaches the age of twelve or fourteen, when she is seized with a headache, chilly sensations or even a

slight chill, a pale face and severe cramps in her lower bowels, often accompanied with fainting or slight convulsions. Now this is pathological and calls for the attention of a physician, who, as a rule can do nothing but give tonic and hygienic treatment.

We seldom find displacements or tumors in girls of this age, so a digital examination is seldom necessary and should not be advised until all possible causes have been thoroughly investigated. Such examinations so early in life often prove more deleterious than helpful.

Puberty is of vastly more importance than is considered, when we bear in mind the fact that a girl's life of many menstrual periods is greatly influenced by the care she takes of herself in early life.

By hygiene, we mean that part of medical science which treats of the cause and prevention of disease. Of the hygienic measures we should observe in puberty, I shall mention first and perhaps of most importance, "dress." The time has come that a mother will permit her daughter to wear any thing that is fashionable. Instead of loose garments of light weight, hanging from the shoulders, she will wear perhaps one woollen underskirt and a heavy overskirt, hanging from the hips and drawn tightly about the waist. All the clothing beneath the waist are held up by being tightly drawn over the hips, and all above the waist are held down by being tightly drawn beneath the bust, and before a girl has reached any regularity in her menstrual courses, she has squeezed herself up in a corset, thus giving herself a shape more to be compared with a wasp than the handsome figure of Venus of Melos. This is a most fruitful cause of chlorosis, a disease which is by no means uncommon and often hard to correct. The late style of walking skirts and common sense shoes, however, are to be indorsed and encouraged by the profession. Just a few years ago they were wearing trains to their skirts which swept the streets and pavements, carrying with them filth and sputa of every character, which was allowed to dry and be brushed off and inhaled by all who perchanced to be present.

That tight lacing is injurious no one will deny. It retards abdominal, pelvis and thoracic circulation, and if it will push the stomach out of its position, it is reasonable that the pelvic viscera might suffer the same oppression. It is reasonable also that ante flexion, probably the most frequent displacement of the uterus in girls of this age, may be produced by tight lacing, thus pushing abdominal viscera down into the pelvis and throwing the body of the uterus

forward. And also the fact that dysmenorrhea is frequently the result of this displacement proves further the importance of loose, comfortable dressing during puberty and menstrual life.

Exercise, I would regard as next most important of hygienic measures, but I would advise moderate exercise; such as walking short distances, horse-back riding, moderate calisthenics and physical culture. I don't think trapeze performances, high kicking, fast running and bicycle or any such severe exercise advisable. Swimming and rowing, in moderation, are both good. Plenty of out door air and sunshine are essential, so for that reason, a girl should be kept out of school for one year or more during her months of puberty, if there are any symptoms of chloosis present.

Cleanliness is of vast importance and should not be overlooked. Hydrotherapy, where indicated, seldom disappoints: especially should it be emphasized here, for verily will you be disappointed if it is overlooked. "Cleanliness is next to Godliness, and whosoever is deceived thereby is not wise."

As to diet, we should not confine ourselves to any special diet, but give good wholesome food that is easily digested.

Eucaïn, Its Sphere in Surgery, With Report of a Case of Rib Resection.

By Lucien Lofton, A. B. Ph. G. M. D.,
Emporia, Va., Ex-president Seaboard
Medical Association of Virginia
and North Carolina.

General anesthesia in minor surgery, and in a great many cases of major surgery is no longer resorted to when complications exist, such as kidney, heart and pulmonary disturbances, or where you find idiosyncrasies existing which debar such a procedure.

On the other hand the layman of to-day realizing the magnificent strides made in the different departments of surgery and the degree of success following operations performed without profound anesthesia is rapidly becoming reconciled to the fact that he in part may observe the manipulations incident to his case and the fear of "never again" awaking naturally is being dispelled.

To teach folk that in ordinary conditions one may be skillfully submitted to the approaches of the surgeon's scalpel practically without danger has indeed been a stupendous task, and it is no idle paraphrase to state that many have been laid low through personal neglect, not especially fearing the "cutting process" but the dread

vapor which dethrones men of all reason and places them beyond the pale of physical resistance, hence local anesthesia is a genuine boon to the sufferer.

With liberal precautionary measures solutions of Eucaïn ranging from 1 to 4 % strength may be utilized with a great degree of safety in most every part of the human economy. Being staple and always amenable to sterilization, the surgeon's confidence in its ultimate action coincident with operations may be guaranteed in advance.

The writer's experience with the alkaloid has been varied and so far has always proved safe, even where as much as 4 to 6 c.c. have been used (above per cent) at one sitting subcutaneously. While its action is not as rapid as cocain it is more lasting, equally as thorough, without being spasmodic as some have claimed, and decidedly less toxic or stimulating. Further, Eucaïn is a better styptic than is cocain, and in no instance have I encountered a hyperesthesia resulting from its use a condition noted repeatedly after exhibiting Koller's anesthesia.

A case in which the author recently used 3 c.c. of a 2% solution for the resection of a portion of the 6th, and 7th, ribs upon the right side demonstrates in a measure the claim I make for it as a safe local anesthetic.

Epps Arrington colored, a farmer age 56 of a stramous diathesis, poorly nourished, had suffered with a typhoid infection 12 years ago. Measles 6 years previous resulting in a chronic bronchial affection, which disturbed him more in early winter than at any other time. Appetite fairly good at times. Is troubled with insomnia periodically, during which time micturition was frequent, though small in quantity. Was of a nervous temperament. Present weight 127 pounds.

Condition two days prior to operation illicit no kidney, heart or liver involvement, but upon auscultation deep mucous rales were in evidence throughout the larger bronchioles. A post-nasal illumination revealed a rhino-pharyngitis, an elongated uvula and a severe chronic amygdalitis of both tonsils. Buccal mucous membranes very anemic. Pulse 84, no elevation of temperature for 48 hours before operation. Habitual constipation.

Situated about 7 c.m. above the margin of the lower ribs and midway the right thoracic wall an unsightly discharge of foul smelling watery pus was observed, which upon bilateral pressure ran very freely. No enlargement of any consequence existed, but upon the insertion of a dull curette necrosed bone tissue was detected likewise minute

pockets characteristic of tubercular degeneration. Pain was a constant symptom upon manipulation, otherwise the place gave little physical inconvenience. Resection of both 6th, and 7th, ribs was advised and accepted, resulting in removing approximately 5 c.m. of the 6th, rib and about one half as much of the 7th. All foci of infection were broken up with a sharp curette, while the affected bony structure was cleansed thoroughly. An immediate and oft-repeated injection of a 50% solution of H^2O^2 as hot as could be borne thrown in the cavity followed by a 1% of $K^2Mn^2O^8$ of which I used about 500 c.c. likewise as hot as the tissue could conveniently stand. The wound was loosely packed with a 1% strength of CH_3I^3 gauze with an abundant wad of 1,000 to 2,000 $HgCl^2$ gauze. Over this I placed an ordinary medium roller lint bandage which was securely by rubber adhesive strips.

Toilets as above every other day for seven days, after which the wound was treated as above minus the solutions. In 18 days the place had completely closed.

Four months after operation the man's weight is 169 pounds, is free from cough or any of his former symptoms and eats ravenously.

Finally judicious usage of Eucaïn will assist to enlarge its sphere in all branches of surgery, but to become negligent of your duty in this connection will easily render it a most dangerous drug. We must ever be alert to any excess in surgery and to fully comprehend what is meant by the term excess, is never experiment when we operate. To experiment means *something to you*. To operate implies the *best* both patient and surgeon possess.

Etiology of Gynecological Disease.*

By Wm. A. Graham, M. D., Durham,
N. C.

Whether or not there is to-day an actual increase in the number of women suffering with gynecological disease is perhaps an open question; many claim that the recognized frequency is due to more thorough methods of examination and to the education of womankind, that these diseases exist and should be remedied. While statistics on such a subject are, from its nature, hard to collect, it is a well-known fact that a very large percentage of women, married and single, old and young, do suffer with disease of the genital organs in its various forms; and the large percentage makes it of

interest to the general practitioner, especially as to etiology and, if possible, prevention.

Among these causes, venereal disease, child-birth with its attending injuries and sepsis have been and will continue to be most important and most common; they have been long recognized and carefully studied; but it is probable that its aggregate amount of disease arising from less common and well recognized causes is as great or greater than the amount arising from these three great causes.

Diseases other than gynecological, lack of attention during the establishment of the menstruation and during the menstrual periods, efforts to prevent conception, traumatism and occupation seem to me to be the more important of the lesser causes.

Gynecological disease is caused by or associated with disease of various kinds; e.g. the infectious diseases of childhood with the accompanying vaginitis, producing a weak spot for infection or an alteration of secretion; lagrippe with its tendency to produce irregular periods, menorrhagia and metrorrhagia; Enemias, resulting in amenorrhea, scanty menstruation, obesity and sterility; disease of the digestive tract, including enlarged tonsils, gastric neuroses and inflammations, hepatic congestions, intestinal indigestion, constipation and hemorrhoids, which with the resulting functional involvement of the nervous and genital symptoms completes the vicious circle and produces the typical neurasthenic so common among the women of the present generation; and though it is often difficult to decide, there is probably an appreciable percentage caused by inherent or acquired weakness or instability of the nervous system.

The question of the proper care and attention, as to habits, dress or occupation during the menstrual periods of the young girl and at the time of the establishment of the menses, is one that is difficult and obscure because of the large number of small details which make up the whole. The one well-recognized fact is that girls as a general rule, do not receive this proper care, due largely to the changing conditions of social life, the months in her round of engagements and the teacher in her school duties, forgetting that the physical side of the young woman needs careful study and thought; while simultaneously the child is advancing much more rapidly to womanhood through social intercourse than was the case a generation ago. The result is the familiar picture, dresses to the shoe-tops and the compressing corset: a few years later we find her in college hysterical at every examination period; and again we

*Read before the North Carolina Medical Society, June 10, 1902.

see her the invalid mother of her first born child, a result which shows that there is existing to-day in our social life an evil which is robbing many women of health to which they have a right and transmitting to future generations a weakness which renders them more liable to disease of all kinds.

There is a growing tendency among women to prevent conception; social duties, financial difficulties, the gossip of friends and many other influences foster a wish in the married woman to have as few children as possible, and many are the expedients resorted to in order to accomplish it. An increased knowledge of antiseptics leads to the use of strong and irritant solutions, damaging to the integrity of the mucous membrane; the commercial spirit of the manufacturer has produced the silver "preventative" and the rubber "womb-veil" to be worn in the cervix from period to period, and the constant use of any such appliances must be a source of irritation or infection, giving as it does an opportunity for increased or unlimited intercourse. Inflammatory reaction in various situations is a natural consequence and in its extent may involve other structures than the vagina, including the external organs, urethra, bladder, uterus, tubes, ovaries and pelvis connective tissue, and aside from the deleterious physical effects, there must be considered too the state of mind and lowered moral tone into which these practices lead, until the result is a request to be rid of the child that is to be or an attempt to rid herself of it.

In the widening field of occupation of the woman of to-day, embracing as it does hard labor, often in women physically unfit to do such work, there is found another contributing cause of gynecological disease. The field of their occupation has widened rapidly and then there has not been a proper adjustment of the conditions under which the woman works to the condition of the woman. The wish of the woman to be independent, coupled with that of the employer to get the greatest amount of work for the smallest possible outlay of money, has resulted in crowded work-rooms without proper ventilation or proper laboratory facilities, long hours, poor wages and steep stairs to be ascended and descended. In the home too we find the house girl habitually handles utensils and furniture unnecessarily heavy and does much overhead work. There is apt to be with each menstrual period an increasing tax on the nervous system resulting finally in ill-health, on the one hand functional derangement of the physiology of menstruation or on the other displacements or inflammatory disease of the pelvic organs.

All physicians welcome the increasing out-door life, with its fresh air, sensible clothes, hearty appetite, healthy exercise and general improvement in muscular development, as being what woman has long needed and the effect of which on the whole can be beneficial only. But it must be remembered that in golf, tennis, the bicycle, basket-ball, etc., there exists many opportunities for traumatism with a displacement of the uterus, often unrecognized and untreated, until the strained ligaments have lost their strength and nothing short of operative treatment will remedy it, after months or years of insomonia, restlessness and pain. Traumatism has not received the attention it deserves and should be more carefully inquired after and more importance be attached to it in arriving at a solution of symptoms, mainly nervous, vague and misleading, and often concealed on account of the natural delicacy of the young woman.

To complete the list of causes, many more might be added and enlarged upon, but it has been my purpose to call attention as briefly as possible to those which are of especial interest to the general practitioner and over which he has more control than the specialist. I believe that a consideration of causes existing at present which did not formerly exist must logically lead to the conclusion that diseases of women and especially young and unmarried women are probably increasing and that prevention of this increase can only take place through the influence of the family physician. The subject is one which is complex and it is often difficult, sometimes impossible, to determine the exact cause of an existing derangement or lesion; and only through study of the causes can we expect the most rational therapeutics or successful prevention.

Fevers and the Microscope.

By Hughes B. Hoyle, M. D., Davidson, N. C.

Without doubt the greatest achievement in medicine in the last quarter century is the discovery of the malarial organism and the method by which it is introduced into the human body. For by putting this knowledge into practice we can absolutely control this most wide-spread disease.

That Malarial Fever in all its forms is caused by the presence of an ameba in the blood is a fact accepted by all scientific physicians; that the mosquito is the agent by which the patient is inoculated is equally well established.

But it is not the purpose of this paper to

give the history of these discoveries as interesting as it may be, nor yet to eulogise the patient investigators who have given this knowledge to the profession, though they deserve the highest praise that could be heaped upon them, but to tell of the value of microscopical methods in the diagnosis of the common fevers such as we have in North Carolina.

There are three distinct varieties of the Malarial ameba, the Tertian, Quartan, Estivo-Autumnal.

The Tertian and Quartan organisms are so nearly alike that an ordinary observer cannot distinguish them except by the length of time required in their development, the Tertian requiring 48 and the Quartan 72 hours to mature.

The organisms of Quartan and Tertian Fever begin their existence as small hyaline bodies inside the red blood corpuscle.

In the fresh unstained specimen they may be seen as small clear-looking bodies, either round or irregular in shape, having ameboid movement. They soon begin to develop a pigment which may be seen in the centre of the organism.

Then sporulization takes place by which the ameba is divided into 15 or 20 segments or spores which develop in turn into full grown ameba. This cycle is completed in the Tertian organism in 48 hours in the Quartan in 72 hours.

The Tertian form is much more common than the Quartan at least in my experience, the ratio being twenty to one.

There is rarely any difficulty in a diagnosis of the Intermittent fevers even without the blood examination. Having to distinguish it from Septic infections and the Intermittent fever of tuberculosis the Microscopical examination of the blood is of value, and in skillful hands never disappoints by giving an uncertain result.

The organism of Estivo-Autumnal fever differs from the organism of the Intermittents by being smaller in size, and having very little pigment.

There is also a form in shape of a crescent which is peculiar to this species. This form is as a rule extra-corpuscular.

Unfortunately this parasite is not always easily found in continued Malarial fevers, but of course when it is found it is a certain method of diagnosis.

This organism is invariably the cause of Pernicious Malarial fever.

For the diagnosis of typhoid by means of the Microscope we depend almost entirely upon the Widal Serum Reaction.

While of course this test is not absolutely conclusive, still it is a very valuable adjunct to our other resources, and when taken in connection with the absence of the Malarial

parasite it should be regarded as absolute.

In proof of the value of these proceedings I could report 58 cases Typhoid in which the Serum test was made with negative results in only two cases, and quite a large number of cases of Malarial Intermittent in which the parasites were found without exception.

However, I cannot give such a favorable report in Remittent Malarial, finding the parasites in only about 80% of the cases examined.

I will report three cases that I think deserves special mention. One is a case of mixed infection, the second a case of a typical Malarial which was wrongly diagnosed Typhoid and the third is Pernicious Malarial.

I. E. S., female age 12, had "dumb chills" for several weeks before calling a physician. When first seen 10 a. m., Sept. 2, Temperature 102, pulse 90, abdomen tympanitic and tender, no rose-spots, constipated, tongue brown-fur. Sept. 3, 10 a. m. temperature 104½, other symptoms as before. Examined blood and found the Malarial parasites. Exhibited quinine sulphate in 3 grain doses four times a day after a calomel purge. Sept. 4, temperature 102½ and bowels very tender, tongue still brown coated.

Sept. 5, temperature 103, Sept. 6, 5 p. m. temperature 103, Sept. 7, 10 a. m. temperature 102, 5, p. m. 103, rose-spots on abdomen, made serum test and got a good clumping reaction.

The case progressed like an ordinary case of Typhoid and convalescence was begun the fifth week.

This I believe was a genuine case of Typhoid Malarial fever.

II. L. F., female age 20, seen first Aug. 8, had been feeling bad several days, temperature 100½, pulse 80, abdomen tender. Aug. 9, 10 a. m. temperature 100 other symptoms as before. 6 p. m. temperature 101, slight diarrhoea, made serum test with negative results. The symptoms continued to simulate Typhoid, the temperature gradually rising until it reached 104 the second week. No rose-spots appeared on abdomen which shook my faith in the diagnosis. Made examination of blood and found the Estivo-Autumnal parasite; exhibited quinine sulphate, 5 grains every 4 hours after a purge of calomel, podophyllin and soda. Aug. 20, temperature was normal and convalescence was established.

III. R. C., male, age 24, seen Sept. 19, after a "convulsion." Patient comatose, temperature 106, diagnosis uremic poison. Later I learned that patient had been having chills and the diagnosis was changed to Pernicious Malaria.

Gave 40 grains quinine sulphate per rectum which was passed after 20 minutes. Repeated dose in 1 hour.

The patient developed a Remittent fever which resisted quinine in heroic doses for 2 weeks. The temperature ranging from $101\frac{1}{2}$ to 104 .

I made an examination of blood the second day and found the Estivo-Autumnal parasites in abundance.

Cerebral Thrombosis.*

By F. E. Coulter, M.D., Omaha, Neb. Late Assistant to Sir W. R. Growers, M.D., F.R.S., National Hospital for Paralyzed and Epileptic, London; Neurologist, St. Joseph's Hospital, Omaha; Professor Clinical Neurology, John A. Creighton Medical College; President Omaha Medical Society, etc., etc.

Of all vascular lesions found within the cranial cavity Thrombosis is the most common. This statement may not be accepted by some of the members present, however statistics will verify it. This faulty idea regarding the frequency of Thrombosis may in part be due to the teaching of some of the older authorities, who did not make a very clear division between Thrombosis, embolism and hemorrhage, in fact some of them state it is impossible to differentiate the conditions. We will grant in some instances this is probably true, but certainly not in the majority, and it is our duty to endeavor to draw the lines as close as possible and make the distinction clear, before we are able to formulate an approximate treatment which is the main object to be desired.

Do not conclude from the statement just made, it is the purpose of this paper to give infalible guides in each and every case observed, but in order to discuss the subject indicated by the title selected it will be necessary to call attention to those conditions that it most nearly simulates.

Those of us who have practiced medicine a few years understand well how futile the effort to place in some particular class every form of disease we meet. The variations are so numerous that to classify at times seems almost impossible, and yet under such circumstances we should not grow discouraged, but instead strive to make clearer the lines of separation and eventually success will crown our efforts.

Time will not permit here to go extensively into the etiology or pathology of Thrombosis, it being sufficient to say one of two conditions, or possibly both, must

be present as factors in every case, namely, an abnormal tendency of the blood to clot, or an alteration in the walls of the blood vessels. The former of these conditions is rare as compared to the latter, the changes referred to in the circulating medium are most frequently encountered in the aged, the gouty, those who suffer from malignant disease, or those suddenly weakened much, as after childbirth, or following the course of a serious and prolonged illness.

The changes found in the blood vessels usually can be placed in one of three groups—trauma, atheroma, or syphilis. Thrombosis may involve any of the cranial vessels, the arteries perhaps are most frequently involved, but the veins and sinuses are not exempt by any means.

When the veins or sinuses are involved it is frequently a most serious as well as interesting condition, but it is not our object to discuss that portion of the subject at present. As to the arteries involved, any of them may become the seat of this disease, but those most liable to be affected are the vertebral, basilar and middle cerebral. The symptoms present in a particular case you will at once perceive depend upon the artery involved. To a considerable extent, the following case serves to illustrate a Thrombosis of the corticle branches of the left middle cerebral artery, due presumably to a syphilitic endarteritis.

History: M. D., Female, married, Canadian, aged 47, was admitted to St. Joseph's Hospital, Omaha, Feb. 28, 1902, suffering from right hemiplegia, and aphasia. Duration of present illness 4 months. The family history disclosed that the patient's mother had suffered a stroke of paralysis some years before death, otherwise there was nothing of material bearing on the case. The past history revealed healthy childhood, menses at seventeen, with some pain and more or less irregularity. Married at 24, no children, but three miscarriages, all early and without apparent cause.

No history of rash, but repeated sore throat. Pelvic and ovarian trouble 1899, in bed five months, seriously ill, but no operation. Last menstrual show one and a half years ago. Some trouble left tibia, lower one-third following injury at 17, more or less trouble because of this condition until six years ago, when she submitted to an operation, at which time a portion of the bone was removed, resulting in the healing of the wound, but the ankle remained stiff and weakened.

Present illness, Oct. 28, 1901, during forenoon, suddenly, and while at work arranging the house, subsequent to moving previous day, lost speech, was not unconscious,

*Read before the Nebraska State Medical Society, at Omaha, May, 1902.

and had no convulsion, could only say "yes" or "no" and a few other short words at that time, and has improved but little until the present. Suddenly, two days later right arm became limp and useless, but the right leg was not affected at this time, for she could and did walk without assistance. Four or five days later, following the second attack, suddenly the right foot began to drag and has been partially paralysed ever since.

Was not unconscious, or convulsed, or sick nor vomited at any time, neither vertigo, or headache present so far as now able to recall history. Directly following last attack, right hand and arm numb, for four or five days only, but unable to get history of right leg similarly affected.

Two weeks after onset described, had a choking spell lasting two to three hours and was unable to swallow anything during this time, but soon recovered from this portion of her affections. Directly following paralysis could not control the bowels or bladder, this improved some after one month, but has had a few accidents with both since. Has not made much general improvement up to time of examination, Feb. 28, 1902.

On examination, one finds a woman of medium size, brown hair, expression rather anxious, fairly nourished, nervous and emotional but sleeps well. Markedly aphasic, both motor and sensory, some word deafness, also word blindness, cannot write, but can copy easy letters. All special senses normal. Mental condition and intelligence has never been of a very high order, but is attentive and memory does not seem defective, is lachrymose upon the slightest provocation and laughs as readily. Fields not contracted and no heminopia upon rough test.

Cranial Nerves—3rd, 4th, and 6th. Pupils equal, and react slightly to light, but normal to accommodation. On extreme lateral deviation right and left, fine nystagmoid movements are observed but are not sustained, none upward or downward. No diplopia, or definite ptosis. Right lid droops just a little more than the left. Discs normal.

5th. Normal.

7th. Upper face weakened on right, lower face, markedly weakened right, more noticeable on voluntary than emotional movements.

9th. Palate, normal, upon reflex stimulation and on phonation.

10th. No trouble with deglutition, and no dysarthria, but aphasic.

12th. Tip of tongue protrudes to right.

Sensory System. Normal, no subjective or objective alterations found.

Motor System. Muscle of neck and trunk fairly good, right is a little weaker than the left. Left upper extremity normal. Right upper extremity in position found usually in hemiplegia, partially fixed at shoulder, flexed at elbow to a right angle, semi-flexed at wrist, with the fingers and thumb almost closed and is carried across the chest. Motion limited at shoulder to $\frac{1}{2}$ normal range, and general condition of contracture found throughout entire member which can be overcome by considerable force, but produces pain. Supination and pronation somewhat affected, only slight movement on voluntary effort, but more upon associate. Left leg good power and range, movements good at hip and knee, ankle weakened and stiff, (because of previous diseased condition). Right lower extremity markedly weakened, and range lessened, limited one-fourth at hip, knee and leg more, most at ankle and foot. Unable to flex and extend ankle against but very slight resistance.

Reflexes are all plus on right, while those on the left are plus or active. Ankle clonus on right, but absent on left.

Plantar. Babinski extensor right, flexer left.

Organic Reflexes. Bladder slightly incontinent. Rectum, normal, at present, but history is of being unable to control, following onset of present illness. All other organs normal. Vessels not in atheromatous condition.

Let us ask ourselves some questions in connection with this case. First, Why do we call it a case of Thrombosis? May it not have been a hemorrhage or embolism? Second, Why do we locate the lesion as one involving the corticle branches of the left middle cerebral, and third, Why do we say it is syphilitic?

First, let us determine if there are any differential points between the three conditions mentioned, namely, Thrombosis, preferably occurring in the aged, also in those who are suffering from vascular degenerations such as atherom, or syphilitic disease of the vessels.

The onset is usually rapid, but not sudden. Premonitory symptoms are frequent, tingling, numbness, headache, vertigo, etc. Often it occurs during sleep, when the circulation is at the lowest ebb, and following some unusual fatiguing exercise the previous day. If occurring during the waking hours unconsciousness is but slight, or absent entirely, as in the case just recorded. Usually no complications of the heart or kidneys are found. Debilitating influences, such as prolonged disease, or nervous depressions are often present, a great shock may cause it. Thrombosis as a rule does

not result in immediate death at the time of onset. Coma is rare, and there is but slight temperature alterations, and convulsions are not a frequent occurrence at the onset. In hemorrhage on the other hand we find a sudden onset, and that it occurs often during exertion. The patient is usually between 40 and 65 years of age or over. If younger it is usually fatal. Unconsciousness, coma, and stertor is usually present, also often convulsions. The pulse will be found full and tense, and usually the heart is hypertrophied. The arteries are frequently found diseased, and if the ophthalmoscope is used the characteristic silver wire vessels may be seen in some cases in the fundus and is the condition that usually accompanies certain forms of kidney disease.

Dr. Williams, of Manchester, Eng., has reported on a number of recent cases both of hemorrhage and Thrombosis as to the conditions revealed by the ophthalmoscope, and he found in the former, that is, hemorrhage that the fundus on the same side was congested, and at times hemorrhage were present, and in the latter, Thrombosis, that optic neuritis was not of unusual occurrence. While these conditions are not present in a great number of cases, yet they have been noted in enough to be of considerable diagnostic importance, and may render material assistance when one is called to a case in which the previous history can not be obtained.

Premortitions are generally wanting in hemorrhage and there is found marked temperature alterations, especially the first few days following the onset. Death is often the result of such a lesion, especially in the 2nd or 3rd decades of life.

If embolism be the condition we have to deal with, we will find the patient usually younger, and the onset is sudden, confined to a few seconds usually. Unconsciousness may or may not be present, and if an embolism be the etiological factor, it must have some source of origin, the heart being the most fruitful, hence this organ should always be carefully examined. Coma, if it supervenes is generally transient and premortitions are rare. The temperature variations are slight at the onset, and are in marked contrast with those hemorrhage, but are quite similar to those found in Thrombosis.

We recognize at once, then, that the case referred to conforms to Thrombosis, rather than to either of the other conditions mentioned.

2nd. Why do we conclude that the left corticle branches of the middle cerebral are the vessels involved. There are only three locations that are likely to be involved in such a lesion. They are the internal capsule,

the white substance of the corona radiata, and the grey cells of the cortex. Now the white substance of the corona radiata can be eliminated at once, for it is very seldom the seat of a lesion of this nature or any other vascular lesions, such lesions usually partaking of the nature of the cortex or basilar ganglia depending upon which it is nearest located.

The internal capsule can be eliminated because it would be most improbable to have three distinct small vessels in this location each repeatedly involved in turn without disturbing the others. The fibres of which the internal capsule is composed are entirely too closely associated for such a condition to transpire. All three would have been involved at the same time to some extent at least had the seat of the lesion been in the internal capsule and this does not conform to the history of the case.

Again the form of aphasia we have in this case does not conform to a lesion of the internal capsule, hence there remains but the cortex in which the lesion may be located. When we come to examine the terminal divisions of the middle cerebral artery located at the bottom of the fissure of Sylvius we see that we have branches that anatomically conform to the arteries involved in this paralysis, namely, the face, the arm, and the leg and as these areas are supplied each by a separate branch, it is but reasonable to suppose, they each in turn were involved, giving rise to the sequence of symptoms found in the history. This point is most important, and would be interesting to discuss further.

3rd. What are the reasons for supposing this was a case of syphilitic origin? In answer to this question you will note that the age of the patient is not that at which one would expect atheroma commonly to occur. Again the previous history refers to repeated miscarriages, without any apparent cause and followed by serious disease of the female organs of generations. No disease of the encephalon has so great a tendency to be multiple as that of a syphilitic nature, and the multiplicity was certainly demonstrated in the present case. She gave no history of suffering from any condition previously, to which it could be attributed or which might cause Thrombosis other than syphilis.

Treatment.—One of the points of most importance to be considered in a case of this character as soon as the nature of the lesion has been established is that of treatment. The early treatment of Thrombosis is much the same if it be of specific origin, or if of some other character, this statement will not apply so well to the latter treatment. The important point at this

stage is not to treat a case of Thrombosis as if it were hemorrhage, because the indications are almost diametrically the opposite. In Thrombosis the general indications are for some remedy of a stimulating character, something that will keep the already enfeebled circulation of the blood in motion, and not allow it to assume a condition of stasis, also to administer such remedies as will prevent the blood from clotting if possible. In hemorrhage on the other hand, the indications are for sedative remedies, and to administer such as will favor the formation of a clot.

As to the especial treatment of Thrombosis, "Gowers" calls attention to perhaps the most important points as follows: "See to it that nothing interferes with the returned circulation. No constricting bands around the throat. Sinapisms to the back of the neck have a reflex effect on the blood vessels, and quicken the circulation preventing stasis. Action of the heart should be kept uniform and steady by the use of strophanthus and digitalis," and we may add strychnia at times is serviceable.

"The head should be slightly raised. The bowels should be open, but not so violently as in a case of hemorrhage because of the tendency to weaken the heart. Venesection is not to be considered in this condition or anything of a severe depleting character." If stimulants are necessary ammonia, alcohol, or ether may be used the first few days, but should be avoided later. Yet in hemorrhage they had best not be used at any stage of the treatment. Upon regaining consciousness, if that should have been lost, and headache is found to be present, the head may be elevated and ice applied. Just at this point I wish to say, had the case reported, been definitely recognized at the time of onset and treated as indicated above, no doubt only a portion at least of the resulting paralysis would have occurred.

A case illustrating the point in question was admitted under Gowers to the National Hospital, London, Nov. 29th, 1901, and gave the following history. Male 35, clerk, married, syphilis, eight months before.

Nov. 16th, 14 days before, noted he could not hold his fork properly in left hand, also that there was some tingling of the same hand, and that the trouble gradually grew worse during the day. No pain, but gradual weakness supervened. No convulsions, spasms, vertigo, sickness or vomiting, and no other weakness at that time. November 27th, 2 days before admission, noted left face drooping and could not articulate so clearly as be-

fore. Tingling above referred to, had continued during the past ten days, but only when fingers were touched. Last two days slight vertigo, upon waking, or turning in bed. Also last two days noted the left leg and foot tingling and numb at times, but did not in any way interfere with walking.

I shall not report in full the result of the physical examination. Suffice it to say, that it warranted the diagnosis of commencing Thrombosis of the right middle cerebral branches. In this case the treatment was inunctions of mercury, potassium iodide in doses of grains 15 three times a day, also Tinct. Diatalis and Tinct. of Nux Vomica and Tinct. Cinchona, and the result was, that there was no progress in the paralysis, and gradual improvement of that which already existed. An important point in these cases is when it is concluded to give iodide, do not give it in large doses, for it increases the tendency of the blood to clot as is noted in cases of anurism where the same remedy is exhibited for the purpose of forming a clot.

Polyhydramnios; Its Differential Diagnosis and Treatment. With the Report of cases.

By Edward P. Davis, A.M., M.D., Professor of Obstetrics in the Jefferson Medical College; Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic; Visiting Obstetrician to the Jefferson, Philadelphia and Polyclinic Hospitals, etc.

Case 1. A multipara, much depressed in general health, with rapidly increasing distention of the abdomen, the cervix tightly closed, dilated by an elastic bag, the membranes ruptured artificially and compression made by a broad bandage held across the abdomen by assistants. Eleven quarts of amniotic fluid escaped. The foetus presented in a transverse position and was delivered by podalic version. The placenta was removed, the uterus douched with antiseptic solution and tamponed. Abdominal compression was continued, the mother making a good recovery. The foetus had but little tissue in cord and brain. Both were rudimentary in character. It was otherwise well developed and stillborn.

Case 11. A multipara, sent for removal of cystic tumor, supposed to be ovarian. During previous pregnancies had been well, during present pregnancy had much nausea and rapidly increasing distention of the abdomen beginning at the fifth month. Urine practically normal; blood showed slight anaemia. On examination, abdomen greatly distended, no foetal parts nor heart sound could be found. Finger passed

through the cervix detected small foetal head floating in fluid. Diagnosis of polyhydramnios was made, membranes were ruptured and about two gallons of fluid were allowed to escape. Labor followed with twins, one of which had normal chorion and amnion with sac unbroken, the other had polyhydramnios. The placenta was large and edematous, the veins of the cord of one twin greatly enlarged and tortuous and the tissue of the placenta and cord was granular with areas of cystic degeneration. The mother recovered well.

Case III. Primipara, previously well. During early pregnancy excessively frightened by lightening. Was at the end of the ninth month. Came into tedious labor with excessive amniotic liquid. Male child weighing five and a half pounds delivered by forceps. It breathed feebly and lived ten minutes. Posterior portion of vertebral column and lower cervical and upper dorsal region deficient in development, meningocle present. Placenta thicker and larger than normal, quantity of amniotic liquid not much in excess, the cord very long and spiral. The mother made a good recovery.

Case IV. Primipara, white, aged 18. Mother died in confinement and cause not stated. Pelvis narrowed at the lower portion, expanded at the brim systematically; the urine normal, the patient fairly well nourished and suffered little during pregnancy. Complained of pain in the right upper portion of the abdomen, dyspnoea and sleeplessness. On examination, abdominal distention marked, foetus could not be outlined nor could foetal heart sounds be distinctly heard; the patient's lower limbs were considerably swollen, her heart action labored. The patient complained of indefinite pains for several days when the os was found fully dilated. The patient was given tincture of nux vomica, the membranes were ruptured and compression applied to the abdomen. When the membranes ruptured, the head immediately engaged, the child descended and was allowed to emerge from the body of the mother gradually.

The placenta was removed, the uterus douched and packed with gauze. The mother made an uninterrupted recovery. The foetus gasped but did not breathe; its heart-beat persisted for three quarters of an hour in spite of respiratory failure. Upon autopsy, general dropsy was found and in the abdomen and pericardium a large quantity of fluid. The lungs were edematous, the kidneys showed atrophy of the pyramids and the liver was softened and enlarged. The cord was shorter than the average, the placenta boggy, light in color,

large and friable. The decidua was much roughened, resembling a fibrinous exudate.

Case V. Multipara, with moderate quantity of fluid. Dilatation well advanced, but pains inefficient because of over distention of the uterus. Made patient sit upon a bucket, punctured membranes and allowed several quarts of fluid to escape. Gave quinine and ergot. The child was speedily delivered; it failed to nourish properly and died in ten days with symptoms of intestinal obstruction.

By polyhydramnios is meant more than two pints of amniotic liquid at full term. As much as even gallons has been seen in the human species. Pathology of the condition not fully known. Many conditions accompany polyhydramnios. The placenta often large, dropsical and infiltrated, Jungbluth's vessels often enlarged amnion and chorion may be thickened with extensive fissures in the epithelial layer of the amnion and fatty degeneration of cells. By experiment, seven times more fluid passes through veins than through arteries of cord into the placenta. Any foetal condition causing venous engorgement tends to produce polyhydramnios. Irritating substances formed in lymphatics may cause this condition. It does not result from increased renal action in the foetal kidneys. Excessive secretion from the cerebro-spinal canal of the foetus may contribute to polyhydramnios. Polyhydramnios is normal at the fourth month and its persistence results from failure in normal development. By cryoscopy further information regarding the osmotic properties of maternal and foetal blood and of the liquor amnii may increase our knowledge. Bacteriology gives no information upon the subject.

The diagnosis is made by first diagnosing pregnancy, then by observing that in polyhydramnios we can usually obtain evidence of faint uterine contraction and can often insert the finger through the cervix and detect a presenting part. Ectopic gestation must be kept in mind as polyhydramnios may complicate ectopic pregnancy. In ovarian cyst the illness is longer, the swelling at first unilateral. The intermittent hardening of the tumor is absent and the uterus can be found but little enlarged. In ascites the dullness changes when the position of the patient is altered.

When pregnancy is found, a second diagnosis must be made to recognize or eliminate the presence of pregnancy and ovarian cyst, pregnancy and ascites, plural pregnancy, and hydatid mole, a very large child or malformed foetus. In hydatid mole, the pear-shaped uterus has little fluctuation and there is repeated discharge of blood. In large or malformed foetus the heart can

usually be heard and palpation reveals the child. While twin pregnancy can generally be recognized it may be completely mistaken for polyhydramnios. In exceptional cases, ovarian cyst complicating pregnancy may be difficult to diagnose and exploratory incision may be necessary.

Attention is called to misleading phenomena, the absence of such tension upon the membranes as would be expected from the quantity of amniotic liquid and also the absence of early shortening of the cervix.

Treatment by drugs is without value. When polyhydramnios is slight and not increasing, the patient's health remaining good pregnancy should not be interrupted. When distention increases rapidly and the patient's health is impaired, under thorough antiseptic precautions the cervix should be dilated sufficiently to admit the finger. A pair of uterine dressing forceps closed should be inserted and the membranes ruptured, the forceps opened and a rent sufficiently large to permit the introduction of the finger. Fluid should be allowed to escape very gradually until the presenting part descends firmly against the cervix. Firm pressure must be made over the abdomen by a many-tailed abdominal binder or broad bandage held by assistants. The patient must be watched as labor is often precipitate and the foetus may assume unfavorable positions. Labor should not be hurried in the interests of the child because the foetus is often deformed.

Polyhydramnios is dangerous to the mother from over distention relaxation, hemorrhage and increased danger of sepsis. The uterus must be completely emptied and made to contract. A hot intra-uterine douche of 1% lysol, tamponing with iodoform gauze, the hypodermatic use of strychnia and ergot and other stimulations are necessary.

Occasionally after abdominal section, the excess of amniotic liquid has disappeared by absorption.

Venereal Disease and Christian Science.

By F. R. Millard, M. D., San Deigo, Cal.

Outside of New York City but little attention has been given to the report of the committee of seven, that was selected to report on the prevalence of venereal disease in that city, and if possible suggest some plan by which it might be diminished. From records of institutions, and from circulars filled out and returned by private practitioners, a record was gotten of 225,000 patients that had been treated within the year, and the committee was morally

certain that all who were affected had not been reported. A further conclusion was, that not only were a greater number of persons affected, but that the mortality therefrom was greater than it was from all other contagious diseases combined. Several suggestions were made whereby some decrease might be made, but the one which was thought to promise most, was better education, not only of doctors, but of the laity; particularly of the young of both sexes. A good many doctors are much exercised over christian scientists, and several plans have been suggested by which to exterminate the evil. Here too, a better education of the laity has the greatest number of advocates. Christian scientists welcome this and say, that the more widely education is diffused, the more rapidly will be the spread of their cult. They say that the ignorant cannot understand the philosophy of their science.

Hence, we must conclude that as a class the ignorant are immune to the microbe of christian science. The only others who as a class are immune, are those who have the seventh sense, which perhaps, because it is so very uncommon is called *common* sense. The cult is recruited from all intermediate ranks, and from all professions, including some who have acquired (I do not say earned) diplomas from reputable medical colleges. Perhaps some of them are like my friend lawyer—whose wife and daughter persistent, if not pernicious, propagandists of the cult. A client said to him: "Judge. I have know you long and well, and it is useless for you to pretend to me, that *you can really believe* in christian science". Mrs. H.—a man *can believe anything* that will secure peace in his family. To bring the whole community into these two classes, is as manifestly impossible as it is to exterminate venereal disease.

The only other alternative is to get individual immunity, and this brings the doctor who wishes the decrease of venereal disease, and also the extermination of christian sciences up to a hard proposition. For so far as is now known, it is only through venereal disease that individual immunity can certainly be so. So long as a man owns a clap, either acute or chronic so long he is immune to the microbe of christian science. It matters not how thoroughly a man may be intoxicated by it, after three consecutive nights wrestling with a vigorous chordee he will have lost all the science as well as the greater part of the christianity. He also is immune who has a primary sore. It may be said, that later his immunity will be lost. But what will you have? It is the best we have, we must thankfully take the good the gods provide until we can induce them to do better by us.

The members of the medical profession, and they alone are to be held responsible for the existence of christian science. Doctors are wont to ridicule mindaerialism, faith cureism, and christian science, and to characterize them as belonging to that class of superstitious that have always been fostered by their priestly class. However, this may be as to mindaerialism and faith cureism, it does not apply to christian science, for they have less of the common superstitions and more of education than the majority of their rank in life. These isms are the legitimate fruit of therapeutetic nihilism among doctors, and there have been few during the past forty years who have not nourished their growth. Some have done those things they ought not to have done, and some have left undone those things they ought to have done. The doctor who sees that the prestige of his profession is being impaired and holds his peace, is not innocent. When Urit made his neighbor appear to be ridiculous, the doctor laughed as heartily, applauded as loudly as any one and if his own private fad was not hit, took particular pains to pass the witicism along so that both the profession and the laity might laugh with him.

Doctors may meet in their mutual admiration societies, and compare themselves with themselves, and measure themselves by themselves, and vote honors on each other, but this does not hide from the laity the fact that all these isms are increasing in geometrical progression. When the medical fakir raises his voice on the streets of your city, and sells his nostrum as fast as he can hand out the packages and make change it may not prove that he has the confidence of the buyers, but it does prove that you do not have the confidence of your community.

The man who did more than any other man to bring the practice of medicine into contempt in the eyes of the laity, had more admirers than any other man who wore the title of M. D., in America ever had.

If there had been no Boston demigod Holmes, there could have been no Boston goddess Eddy. It may be said that his witicisms were directed to the ignorance and folly of the few, and not to the body of the profession. And the laity did not so need and understand them. It is possible that she is credited with some injurious sayings that he never uttered. But the fact that the laity believed him capable of uttering them emphasizes more strongly his baneful influence.

The serious study of therapeutics was distasteful to him, and he never acquired sufficient knowledge of it to become even a moderately successful practitioner, and he

soon abandoned the idea of practicing entirely, and believing that what he did not know was not worth knowing, he declared that no one knew anything about drug therapeutics; and that no one could know anything about it.

No language, living or dead, had words strong enough for him to express his detestation of the use of the lancet and mercury, and when he was told that statistics proved that since the use of the lancet and calomel had been almost entirely abandoned in Boston, the mortality, from pneumonia, had increased almost 300 per cent., instead of turning his acute intellect and great energy toward devising a more successful treatment, he, perhaps, satisfied his conscience, and certainly gratified his vanity, by ridiculing the idea that drop taken internally could favorably modify the course of any self-limiting disease. I appreciate his contributions to literature much of which will always rank among the best that was written during his time. I honor him for the heroic fight he made to compel the profession in America to recognize the fact that puerperal fever is a communicable disease.

This showed what he was capable of doing, but when the battle was won, the ambition to shine as the wittiest doctor in America, apparently smothered every other aspiration.

To him, more than any other man, and, perhaps, more than all others combined, is due the early recognition of the true nature of that disease, and this recognition, unquestionably, saved hundreds of lives. But therapeutic nihilism of which the laity believe he was chiefest apostle, has cost the lives of thousands, and will cost thousands more, for the lives after them.

Conservative Operations on Ovaries and Tubes.

Burrage (American Journal of Obstetrics), from an analysis of 85 cases, deems the following conclusions justified: 1. It is advisable to do conservative operations in all cases where the ovaries and tubes are not hopelessly diseased in all parts of their structure, except on patients who have pronounced gonorrhoea of long standing, and on the rare cases of malignant disease. 2. When a patient is near the menopause (over 35 years of age) and has ovarian or tubal disease of any considerable degree of severity, it is generally wiser to perform complete removal, with or without hysterectomy, according as the uterus also is diseased or not. 3. In cases of well-marked gonorrhoea of long standing, especially if the patient is constantly exposed to rein-

fection, if both tubes are seriously diseased and closed, total removal with or without hysterectomy is the operation of choice. 4. In certain cases of this class, where the patient thoroughly understands the likelihood that another operation may be necessary at some future time, and wishes to take the chances in the hope of preserving the function of menstruation, conservative operation is permissible. 5. If one tube is patent and healthy in appearance, and there is enough healthy ovarian tissue to preserve, a conservative operation ought to be performed even in the presence of gonorrhoea. 6. With present methods of performing resection of the tubes, if both tubes are found closed at the time of operation, subsequent pregnancy is not to be expected. 7. In severe grades of inflammation of the appendages, irrespective of causation, if the ostium abdominale of one tube is patent, the prospect of subsequent pregnancy after the preservation of a portion of ovary is about 1 in 4 $\frac{1}{2}$, or 23 $\frac{3}{4}$ %. 8. In less severe grades of inflammation, under similar conditions of tube and ovary, the prospect of subsequent pregnancy is about 1 in 2 $\frac{1}{2}$, or 44%. 9. In women who have borne children in both classes, subsequent pregnancy may be expected in 35%, whereas in the previously sterile it may be looked for in only 5%. 10. If it is necessary to remove both ovaries, it is of no advantage to preserve any portion of tubal tissue; but, except under the conditions just enumerated, some ovarian tissue should be preserved in every case.

Dilatation of the Heart in Children.

Eustace Smith, in *The Practitioner*, considers that in childhood the heart may be said to dilate with exceptional ease and the dilatation may be found quite apart from valvular mischief. It is due to blood pressure in a flabby, ill-nourished, or degenerated heart, and may occur without there being any special bar to the passage of blood from the organ. When the dilatation is moderate in amount, as in anemic children, it is probably of little practical importance. The heart's apex is diffused and difficult to localize; the first sound of the apex is muffled or very thin and flapping, and the area of dulness may be widened. Sometimes the external jugular veins are usually visible. On careful inquiry we often find that these children get easily out of breath, and, perhaps, confess to palpitations after exertion. It is rare, however, that they complain spontaneously of anything; in fact, the discomfort induced by this condition of the heart walls seems to be small indeed, and although the heart's action is

sometimes irregular the pulse does not seem to become actually intermittent. As the health improves and the nutrition of the heart is restored, the normal physical signs return. It is in cases of acute illness, when the dilatation is rapid and may be extreme, that we find physical signs and symptoms pointing to a very serious condition. Here the marked increase in the dull area, the feebleness and diffusion of the apex beat, the faintness of the first sound at the apex, and the weak, intermittent pulse show that the dilatation is carried to a dangerous degree. In these cases the second sound is accentuated at the aortic as well as at the pulmonary orifice, and this point has been insisted upon by Dr. Lees as an unfavorable element not to be lost sight of in prognosis. The dilatation affects the auricles as well as the ventricles, and is due to a more or less grave degeneration of the heart muscle. The danger of the case lies in the degree to which degeneration has extended. Therefore Dr. Poynton's researches, which show that destruction of muscular fibre is carried to a greater degree in diphtheria and influenza than in rheumatism, are important as implying that the complication is less to be feared in the latter disease than in the two former. But still the danger is always there, and is greater or less in direct proportion to the degree of expansion of the heart cavities. In such cases, therefore, the limits of the heart should be estimated carefully by percussion. Dr. Lees insists if in diphtheria or influenza the cardiac dulness is found to reach two fingers' breadth beyond the left nipple line, the danger is great. In rheumatism such a degree of distention is less to be feared; but even in this disease a spread to a further finger's breadth should cause us to regard the situation as an anxious one. In any case very rapid broadening of the area of dulness is a symptom of the utmost moment, and if it be accompanied by vomiting, coldness of the surface, and partial collapse, we should speak with great caution of the child's chances of escape. Vomiting must always be regarded with grave misgivings, as it is so often the herald of fatal syncope. In all cases of acute disease where the dilatation is rapid a recumbent position should be enforced, and on no pretext should the patient be allowed to lift even his head from the pillow. Foods which tend to ferment and fill the stomach with gas should be avoided. Treatment should be continued of the disease in the course of which the dilatation has arisen. Iron and strychnia should be our great resource, and the perchloride of iron with solution of strychnia, given in full doses, seems to the writer to be far superior to other remedies.

Charlotte Medical Journal.

EDWARD C. REGISTER, M. D., Editor.

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THE MEDICAL PROFESSION AND ORGANIZED CHARITY.

To ameliorate and lessen actual want and suffering of humanity, is one of the greatest of human attributes that can engage the thoughts and attention of any one who is in position to be of service or helpful in this direction.

While much sincere and honest suffering and indigency exist in the world, there is much apparent want which is not by any means genuine destitution. It is neither need nor suffering in a strictly charitable sense of the matter; but a malingering or assumed appearance of it, and the appearance is made to assume such an aspect of true want as to often mislead those who are at work earnestly and are willing to aid the weak and needy. This is done for the purpose of attracting sympathy to attain some point or to secure that continuous aid wished for without undergoing the physical effort necessary to obtain or secure it in a legitimate manner. Besides this deception, there is much danger through or by an indiscriminate bestowal of charity; of fostering a dependent spirit in many and thus causing an indifference to honest and independent effort. And so by the means intended for relief, evil will come and later actual suffering to those so influenced by the free bestowal of aid, producing additional misery to that of the real weakness of the ill and maimed.

Every precaution should be taken to lead the individual to an independent effort toward duty and self-support and in this way to lessen want and to help the cause of charity work, by lessening the roll of the rank and file.

Every individual, physically able, should be compelled to care for themselves or to be independent in their own welfare.

Every organization in the cause of charity, and of aid to the afflicted, should be protected by including in the organization one or more able physicians who may investigate the physical condition and to be ready to detect imposition and impostors. In addition they are qualified by their every-day dealing with suffering to often direct the proper form of charity to be bestowed.

The very fact of using such means to detect fraud will deter many from undertaking such practice of deception.

Again some persons afflicted with some curable chronic disease, refuse or fail to take treatment of any kind for the purpose of using the physical weakness as a means to attract sympathy, and thus secure alms. Like the character in "Japhet Newlin in search of his Father" where his vallet at first ties his arm to his body to allow for an empty sleeve, and latter in flexing the leg on the thigh and strapping to the knee the wooden peg, while he was begging as a wounded sailor until he found his master.

Many such cases, instead of being allowed thus to continue such deceptive measures would be detected and punished or given treatment, or sent to a hospital if needed, to be cured and encouraged to again assume an independent course of self support.

Recently The New York Charity Organization, in its work of prevention of Tuberculosis, enlisted the co-operation of such leading physicians of New York City as Biggs, Janaway, Bryant, Lederle; and much good is being accomplished.

Throughout the world where a reform movement or charitable organization is instituted in any form of charity work whatever, that organization should include in its make-up, a number of physicians, not only for its protection against impositions, but for the thorough and effectual aid which they may be thus able to render to the afflicted and needy, and in prosecuting the earnest work in the aid of the physical, mental and moral welfare of those in actual need and in the detection of those who are maligners.

Medical Societies could do much toward this moral and philanthropic work by giving earnest aid, encouragement and proper suggestive guidance in the work.

American Medicine for June 28, 1902, says editorially: "It is suggested that every state, city and county society appoint a standing committee of its most public spirited members, whose particular business it should be to co-operate actively with the organized charities in the capacity of an advisory board."

Such a committee taken into the confidence and in full active assistance of any charitable organization will increase its results for good many fold. It will not need to bestow alms and its strength on all who ask aid, but will be able to recognize those in actual need, those actually afflicted. Such an organization will be in a position to study thoroughly each individual condition and thus to direct such persons to a bettering of their condition and to independent effort; if such is possible.

ROENTGEN RAYS AND NEW GROWTHS.

During the past two years or more experiments have been pursued and carefully studied with regard to the effect of the Roentgen Rays on various pathological conditions of the tissues of the body and the skin. More particularly attention has been directed to malignant growths and the various pathological new growths of the skin.

From accidents occurring in the use of the Roentgen Rays for diagnostic purposes when burns occurred the pathological conditions produced was observed to take on certain forms producing effects which promise to be useful in the treatment or effect in the management of new growths to be controlled.

While these studies are only in the experimental stage, yet many clear conclusions are evident and considerable results are obtained that justify further study and experiment, with strong promise that much aid for good will be gained in the treatment of malignant growths.

Various authors and workers have devoted much time and attention to the study in this line and their observations have gone into literature.

Carl Beck¹ in a very carefully considered paper has gone over a series of experiments with the results and conditions obtained upon malignant growths after the effect of the burns by the Roentgen Rays. He says:—"Examinations of the integumental changes in man as well as in lower animals, shows a disturbance of nutrition on the walls of the blood vessels just as in ordinary burns, the main difference consisting in the slower development of the process. The peculiar chemical influence of the Roentgen Rays on the tissues is so exerted that the nutrition of the cells is impaired." He further says² in speaking of operation on a man 36 years of age on whom he operated three times for sarcoma of the left ankle. "After the third operation there was complete cure not only was there no return of the trouble in the ankle, but curiously enough several small tumors higher up in the calf of the leg, not exposed to the Rays, also disappeared.

During the past year or more the bulk of the observation of the effects obtained by the action of the Roentgen Ray upon various new growths and diseases of the skin especially in selected cases, have resulted in the confirmation of the possibilities of this power, in a therapeutic effect for good.

There is presented in the literature such

abundant evidence of successful results as to justify all hospitals in using every opportunity with this method for the study of affecting these new growths and of conditions of the skin and its integument as well as benign conditions. All such cases should be earnestly studied as to the effect of thoughtful and carefully conducted operations by the Roentgen Rays. There can be no honest criticism by the anti-vivisectionists since many of these victims of malignant growths, in themselves are ready to submit to the irritative corrosive treatment of the "cancer doctor."

There is a strong possibility of a new and successful field here in a therapeutic way that promises much that is quite unsatisfactory under present methods or means. If the measures proves successful in malignant growths and there is promise, it will be one of the great epochs in medical history of the twentieth century.

A WORLD'S CONGRESS ON TUBERCULOSIS.

It is proposed that a world's congress on tuberculosis be held in the United States for the study and advancement of knowledge concerning this great "white plague" of the human family.

That those of the profession of our country interested in the advancement of the study of this disease, organize a congress to hold its sessions at St. Louis, Mo., at the time of the Great Fair in 1904.

A congress similar to and in spirit of the British Congress which was held in London in 1901, a meeting which many of our most prominent medical men attended.

It is quite important that meetings of this kind to be held, that this subject may be studied in a body that the great thinkers may compare notes, which will produce results and give scope to the subject that no other influence can exert. In this way the human family learn more forcibly the nature and dangers of this devastating disease, together with its origin and its mode of progress as well as learning how to aid in its elimination by the various preventative measures of which effort is being urged and prosecuted by the medical profession for its control that it may eventually be stamped out.

It would be well for a preliminary meeting of all interested in this project to be called at an early date in the coming autumn for the purpose of formulating plans for the organization; an effort should be made to have some of our foremost specialist in chest disease present.

Such a meeting could be held either at St. Louis, where the proposed congress

1. Carl Beck, New York Medical Journal, May, 24th 1902.

2. Mun Med. Woch. Aug. 6th, 1901.

would meet, and thus the local medical organizations could no doubt be interested in the matter and in whom the management and arrangement could be left. Or it could be held in Washington, D. C., in which event it should be held during the session of Congress, and financial aid could be thereby solicited for defraying expenses of the congress.

The outline of the work of the congress should be broad and searching in its character; the foremost authors and workers in this subject should be urged or induced to take an active part in the proceedings.

Let the matter be urged and the congress made one of honor to our country.

BOOK REVIEWS.

A Text-Book of Practical Therapeutics: With especial Reference to the application of Remedial Measures to Disease and their Employment upon a rational Basis. By Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. deSchweinitz, Edward Martin and Barton C. Hirst. New (9th) edition. In one octavo volume of 851 pages, with 105 engravings and 4 colored plates. Cloth, \$4.00; leather, \$5.00; half morocco, 5.50, net. Lea Brothers & Co., Philadelphia and New York.

One reason for the great demand for this work—a demand almost unprecedented in the history of medical book publishing, may be found in the following quotation from a recent writer:

"Few men possess, as does Dr. Hare, the ability to select exactly the practical information needed by his colleagues, and to furnish it in a manner ready for instant consultation and efficient application."

Each addition of this work means a thorough revision. Every discovery of worth, every really useful new method or remedy is embodied, so that Hare's Therapeutics has come to be synonymous with up-to-date knowledge of remedies, medicinal and otherwise.

The plan of the work is ingenious and most convenient. In its first half is given a succinct account of *Materia Medica*, Food and Diet, and Remedial Measures other than Drugs; the second part gives a complete list of diseases with the best accepted treatment. Each part of the work is arranged alphabetically, and every section is cross-referenced so that full information on any subject can be found quick-

ly and without trouble. In addition to a very full General Index there is an Index of diseases and Remedies, giving suggestions and indications for treatment, with page references to the fuller information in the body of the volume.

In this new addition the author has made changes and additions so extensively that it is almost a new book upon a subject of interest to every physician.

Not only has the text been carefully revised, but all new measures which seem useful have been included, and there have been added nearly one hundred new illustrations, many of which show the actual application of the procedure described.

The demand which has necessitated the issue of nine editions of this work, each larger than its predecessor, is a deserved and appreciated tribute to the author.

Diagnosis by Means of the Blood. By Robert Lincoln Watkins, M.D., Illustrated by 154 Photographs, as observed in General Practice showing Products that are found in definite Diseases. Cloth, 388 pages, including bibliography and index. Price, \$5.00. The Physicians' Book Publishing Co., New York and London, 1902.

The pathological importance of the blood is now recognized by all leading medical authorities. There are few, however, who can avail themselves of this valuable means of diagnosis; because the treatises heretofore extant upon the subject have been intended rather as reference works for the specialist than as text books for the practical physician. Dr. Watkins' book, *Diagnosis by Means of the Blood*, is complete, practical and up-to-date in every particular. The style is clear, straightforward and simple, and as untechnical as the nature of the subject will permit.

The practical nature of the work may be judged from a few of the chapter headings. In the chapter entitled "Method of procedure for a Fresh Blood Examination," Dr. Watkins gives full directions for abstracting the blood for examination, also, as to the special features of the blood that are diagnostically significant. This section includes directions as to management of slide, microscope light, etc., all fully illustrated. Then follow sections dealing with Moving Blood, Dry Blood, Healthy Blood, Unhealthy Blood, etc. Other chapters cover Tuberculosis, Septicemia, Embolus, Meningitis, Syphilis and malaria; also, White Blood Cells, Furunculosis, Neurosis, Poikilocytes, Vitality, Foreign Matter, Antitoxine, Micro-Motoscope. A Peculiar case, McKinley's Case.

All these chapters are superbly illustrated by half-tone reproductions of photographs taken by Dr. Watkins especially for this work. These half-tones are a peculiarly valuable feature of the work, and gives many views unobtainable elsewhere.

The work is unique in its style and arrangement, and will prove of the utmost value to the laboratory, pathologist, to the practical doctor and to the student of medicine. It is, moreover, sufficiently clear and untechnical to be both interesting and instructive to the educated general reader.

Atlas and Epitome of Abdominal Hernias.

By Privatdocent Dr. George Sultan, of Gottingen. Edited, with additions, by William B. Coley, M. D., Clinical Lecturer on Surgery, Columbia University (College of Physicians and Surgeons). With 119 illustrations, 36 of them in colors, and 227 pages of text. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$3.00 net.

This new addition to Saunders' series of Medical Hand-Atlas covers one of the most important subjects in the entire domain of medical teaching, since the hernias are not only exceedingly common, but the frequent occurrence of strangulation demands extraordinarily quick and energetic surgical intervention. While the well-known work of Macready will always remain a classic, it has never made any claim to deal with the operative side of the subject, and this is a side that, during the last decade, has been steadily growing in importance, until now it is absolutely essential to have a book treating of the surgical aspect of the subject. This present atlas does this to an admirable degree, and without question, will prove of very great value to the general surgeon and practitioner.

The illustrations are not only very numerous, but they excel, in the accuracy of the portrayal of the conditions represented, those of any other work upon abdominal hernias with which we are familiar. Indeed like all the other numbers of this excellent series, the work is a worthy exponent of our present knowledge of the subject, and in its field is unrivalled.

A Dictionary of Practical Materia Medica.

By John Henry Clarke, M.D. In three volumes. London: The Homœopathic Publishing Company, 12 Warwick Lane, Paternoster Row, E. C. 1902.

The feature which most strikes the reader is the completeness of the work, as a whole certainly as to the number of drugs treated. It is not an easy task to hunt up some sub-

stance ever used in practice and partly proved which is not represented here. Bitch's Milk, Cat's Milk, Cow's Milk. Milk-curd, skimmed Cow's Milk, Malandrium (made of the virus of the horse disease commonly known as "grease"), Bowen's "Malarial officinalis," Medorrhinum (nosode of gonorrhea), Luna, Orchitinum (testicular extract), Ovi Gallianæ Pellicula (membrane of the shell of a hen's egg), Pediculus capitis, Milk-sugar, and scores of others out-of-the-way substances are found in the index. Now, without here discussing the propriety or impropriety of mentioning or of using any or all of these things in actual treatment of the sick, there is a distinct advantage of having access to a work which tells us soberly what there is known about them. At this time and stage nobody can afford to be hasty in denouncing as trash what happens to be distasteful; we may suddenly awaken to the consciousness that we are simply behind the times.

Of the standard remedies the treatment is complete and eminently satisfactory.

The work is exceedingly interesting and highly suggestive reading, and there are few students of the *Materia Medica* so learned but that they can derive assistance and information from a thorough reading of Clarke's "Dictionary."

From a homœopathic standpoint the work is the best that has ever been published.

The Electric Practice in Diseases of Children. For Students and Practitioners.

By William Nelson Mundy, M.D. 12mo. 631 pp. Cloth, \$2.50, net. The Scudder Brothers Company, Publishers, Cincinnati, O., 1902.

In this work, of moderate size, the author has set forth the methods by which enlightened members of his school at the present day deal with the diseases of children. While particularly addressed to those who practice what is known as eclecticism, its descriptions of symptoms and points of diagnosis must necessarily agree with those of general medicine, and are given in good style, with the compressed brevity suitable to a manual. The author has, wherever possible, avoided disputed points, and has written largely from the basis of personal experience. He has produced a work that will, no doubt, be acceptable to the students and practitioners of his form of practice. While pointing out the remedies corresponding to what are regarded as specific indication, the author freely avails himself of many mineral preparations of which the value has been demonstrated.

"Nature-study and Life," by Prof. C.F. Hodge (Boston: Ginn & Co.), differs in several respects from the ordinary school text-book of the subject. The writer's purpose, as he states it, is "to bring nature into relation to child life rather than to school life, to make it a continuous source of delight, profit, and highest education rather than a formal school task." The book is not to be regarded in any sense as a special treatise. Its whole object is to bring out those facts in nature which are of universal human interest. It is adapted for the most elementary, and at the same time for the most fundamental work, in education—putting the child in touch with the world about him. His method of presenting concrete lessons concerning animals and plants has been tested by years of experience in the public schools of Worcester, Mass., and it has approved itself to teachers from almost every State of the Union who have become familiar with it through the courses given at the summer school of Clark University. Parents and teachers everywhere should acquaint themselves with the author's point of view.

Diseases of the Skin. A Treatise on Diseases of the Skin. For the use of Advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph. D., Clinical Professor of Dermatology, Jefferson Medical College and Woman's Medical College, Philadelphia; Dermatologist to the Howard and Philadelphia Hospitals. Handsome octavo of 1,125 pages, with 220 text-illustrations, and 26 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$6.00 net; Sheep or Half Morocco, \$7.00 net.

This book presents the practical part of the science of dermatology in a sufficiently full and complete manner to make the work one that will give the general practitioner a clear comprehension of the symptomatology, diagnosis, and treatment of the various affections with which he is most likely to come in contact. Diagnosis being the most difficult and confusing part of cutaneous medicine has been wisely accorded considerable attention. The elaborate remarks under General Diagnosis will be found of substantial aid in narrowing the diagnostic possibilities. Treatment has been detailed with unusual clearness and accurateness, the author, in addition to the remedies and methods used in his own practice, having referred frequently to those employed and advised by others.

But in stating that the book deals with the practical parts of dermatology, it is not

to be understood that etiology and pathology have been neglected. These have been given entirely satisfactory consideration, and their treatment will be found a complete, but concise, reflex of our present knowledge. The clinical and pathologic aspects are further elucidated by a large number of very beautiful illustrations, mainly from the author's own collection, besides a number of colored lithographic plates of exceptional merit. Indeed, the work, though originally planned for the student and general physician, will be found of material assistance to the dermatologist, as presenting the most recent achievements in the subject.

St. Clair Thomson, in the London Practitioner, deprecates the use of the tonsil guillotine in subjects over 20 years of age, and suggests the cold snare, enucleation, morcellement, or the galvano-cautery. The guillotine used should be of the smallest size that will do the work. This is always smaller than the longitudinal diameter of the gland, for as the pedicle is much narrower than the presenting surface, the loop of the instrument should be threaded over it so as to closely embrace the neck. This avoids any risk of embracing parts of the faucial pillars, or even deeper structures, even though the tonsil be firmly pressed in from the outside. If bleeding does not cease in 10 or 15 minutes, illuminate the region well, find the bleeding point, and clamp it with a pair of catch forceps. Failing this, steady pressure must be kept up on the surface for some time, and there is nothing that does better than the practitioner's forefinger.

The Perverts, by William-Lee-Howard.

"It deals with those phases of physical existence which are termed perversions, dipsomania being the main topic. But it does not by any means confine itself to this topic; on the contrary, it touches upon almost every description of vice, and one of the chief characters is affected with an hysterical perversion which is not infrequently discussed in medical works, but is rarely mentioned in fiction. There is more of suggestion than of plain speaking in this aspect of the work; yet the author is at times plain-spoken enough in all conscience." 12 mo. Cloth Bound, Price, \$1.50. At all booksellers, or sent by mail, postage free, on receipt of price, by G.W. Dillingham Company, Publishers, New York.

Greek Art. Dr. T. W. Heermance has written a brief sketch on this subject. This little book is illustrated with several excellent photogravure reproductions of Greek

sculpture. In the same volume is included as an appendix a biography of Greek art by Prof. F. B. Tarbell, of the University of Chicago. A. W. Elson & Co., Boston, Mass., Publishers.

LITERARY NOTES.

American Gynecology is to be the title of a new journal which is announced to begin publication in July. It will be devoted to gynecology, abdominal surgery, and obstetrics. The journal will be owned and controlled by a stock company consisting solely of members of the profession interested in its special field. It will be conducted under the editorial management of J. Wesley Bovee, M.D., Washington, D. C.; Charles Jewett, M.D., of New York; Charles P. Noble, M.D., Philadelphia; Reuben Peterson, M.D., of Ann Arbor, Mich.; and J. Whitridge Williams, M.D., of Baltimore. Mr. E. W. Reynolds will be the business manager. The office of publication will be No. 1 Madison Avenue, New York, N. Y.

ABSTRACTS of the Leading Articles of the Month.

A Few Observations on the Blood Pressure in Mental Disease.

Alexander (The London Lancet, July 5, 1902) says that the blood pressure is considerably increased in acute passive melancholia, less so in acute demonstrative melancholia, and generally low in chronic melancholia, increasing when the mental symptoms become acute. In mania the pressure is above normal, though not so marked as in melancholia. General paralysis presents many types of insanity, and consequently the results of examination varied greatly. In the latter demented stages the pressure readings were uniformly low. In pure senile mania and melancholia the readings obtained corresponded to those registered in the same affections occurring in an adult or an adolescent, but the blood pressure was, as a rule, much above normal in that variety of senile insanity which is associated with dementia and which is characterized clinically by a constant fidgety motor restlessness; and it is in this form of insanity that drugs of the nitrite class are of most benefit. The blood pressure in mania appears to be considerably modified by the presence of general physical debility, and thus restlessness in the chronic manic of poor physique is, as a rule, associated with a normal or even low blood

pressure, though an elevation may occur with any increase in excitement. Without the presence of any organic disease to account for it, some cases of senile dementia, with constant restlessness as a marked symptom, have a high blood pressure, and these patients are often much benefitted by the administration of such a drug as erythrol tetranitrate. As is well known, an attack of mania is usually ushered in by certain premonitory symptoms and one of the commonest of these is mental depression. On the appearance of any of these premonitory symptoms it is often possible to ward off the acute attack by confining the patient to bed amidst quiet surroundings and by keeping him on a low diet—precisely as a case of melancholia may be treated. The writer has always found the symptoms, mental and physical, antecedent to an attack of mania to be accompanied by a rise in blood pressure.

Chronic Hypertrophy of the Fauical and Pharyngeal Lymphoid or Adenoid Tissue.

Marsh (Lancet, June 21, 1902) says that adenoids vary in size from a small localized patch to a mass filling the nasopharynx. Their consistence is at first softer than that of enlarged tonsils, owing to a preponderance of the lymphoid over the fibrous tissue, but at the age of puberty fibrous atrophy more or less takes place and the consistence becomes more dense. This atrophic process is not invariable, however. The following classification of adenoids as to size and shape may be made: 1. A central form comprising (a) the ordinary form concentrically arranged with little or no lateral hypertrophy and (b) a central boss or pad, the prominent symptom being impeded nasal respiration. 2. A lateral form with hypertrophy of the lateral bands most marked and often extending into the fossa of Rosenmuller, deafness being the prominent symptom. 3. A diffuse form with a general and irregular hypertrophy of all the lymphoid tissues in the nasopharynx and pharynx, seldom attaining any great bulk, the prominent symptom being catarrh. The symptoms of adenoid disease may be arranged in three groups: 1. Obstructive, caused mechanically by the enlargement wholly or in part occluding the openings into the nares and Eustachian tubes and causing nasal obstruction and deafness, and a muffled or "dead" voice. 2. Catarrhal due to the great suitability of the recesses as resting places for the catarrh microbe. With any diminution of tissue resistance, the microbe gets the upper hand. There is a great tendency for these attacks to become chronic and difficult to cure. Toxines

generated by the microbes may be absorbed by the lymphatics and cause enlargement and tenderness or suppuration of their associated cervical glands, the parotid set.

3. Reflex symptoms—headache, cough, spasm of the glottis, asthma, etc. Adenoids if neglected often seriously affect the development of the oronasal regions, the thorax, and that of the body generally. In some cases the arrest of development of the posterior nares is more marked on one side, the nasopharynx being generally shallow and small. When nasal stenosis to any marked degree exists, the growth of the superior maxilla is interfered with; the hard palate becomes high and arched, and narrowed in front almost to a point. The mouth is constantly open and the upper lip drawn up. Narrow nostrils with marked depression around the *alæ nasi*, open mouth and overlapping teeth, and drooping jaw, combine to make a typical facial appearance. The teeth seem more prone to caries, avascular abscess, and chronic pyorrhœa. The lungs are never properly expanded, the thorax remains narrow and contracted; the child is pigeon-breasted with a deformed sternum. The general development of the child is bad; it is stunted in growth and has but little muscle power. Such children sleep poorly, become listless, capricious, irritable, and inattentive. In the majority of cases the history given is that the child has the mouth constantly open, snores at night, frequently catches feverish colds, is then somewhat deaf, complains of earache, and does not "get on" well. Nasal obstruction, from hypertrophic rhinitis, deflection of septum nasi, mucous polyps, or more rarely from a nasopharyngeal polypus, sarcomatous growth or meningocele, forms the common source of errors in diagnosis. Digital examination should not be the routine method of examination, as it is very unpleasant and alarming. Children are quite as tolerant of posterior rhinoscopy as adults.

Operation is necessary or advisable for any one of the following conditions: 1. Aural symptoms—deaf-mutism, catarrhal or suppurative middle-ear trouble, and temporary deafness from defective middle-ear aeration. 2. Distinct nasal obstruction, especially if impeding development. 3. Frequent and chronic catarrhal attacks interfering with health and education. 4. cervical adenitis associated with adenoiditis; and 5th, reflex conditions, unrelieved by treatment, for which there is no other cause. Incomplete operations are due chiefly to want of method. He places the patient in the recumbent position, with the head and shoulders slightly raised on a low pillow. The adenoids are removed with a

large-sized Gottstein curette, the handle being held firmly in the fist, and the growth cut away with a quick *tour de main*. An examination is then made with the finger, after which the tonsils are quickly removed. The risks of the operation are slight. At the conclusion of the operation the patient should be at once removed to bed, the head and shoulders being raised, and encouraged to sleep. The degree of pain experienced after operation is very variable. When the patient is convalescent, nose breathing exercises should be carried out for a time to hasten the restoration of this function. A remote cause of non-improvement of hearing is the occurrence of adhesions between the Eustachian prominence and posterior wall of the pharynx. True recurrence is very rare.

The Feeding of Children during their Second Year.

T. S. Southworth (Archives of Pediatrics, May, 1902) says that if the child has not been weaned at twelve months, it should be allowed some breast milk through the hot weather, though much of its food should be given by bottle. One of the first additions should be well cooked and strained gruel or jelly of oatmeal, wheat or barley. Constipation may be relieved by oatmeal, while diarrhea, eczema or intestinal indigestion would contraindicate it. Soon a cereal with milk or cream can be given regularly each morning, constituting breakfast, salt being preferable to sugar. Rice may be given later in the day. Cow's milk should, in any case, be the basis of feeding for the entire second year. The bottles are often discarded as soon as possible, because of the dangers from lack of cleanliness, but boiling water and care will overcome this objection to the use of the bottle, and a child will often take more nourishment from a bottle than from a cup. The milk is also taken more slowly and regularly from a nipple. The 12-ounce bottle should be substituted for the 8-ounce for children over ten months of age. A general schedule for diet is as follows:

Half past seven a. m., breakfast, including milk; 11 a. m., bottle of milk with crust of zwieback; 2 p. m., dinner with rather less milk, as the other food is increased; 6 p. m., supper, including bottle of milk; 10 p. m., bottle of milk. Soft-boiled eggs may be given at intervals, or bread in the form of crust or zwieback, bread and egg, or bread and milk, or orange-juice, two or three stewed prunes with the skins removed, or the soft part of baked apple. About the middle of the year it is safe to allow fresh green peas, asparagus tips, tender string beans or spinach

mashed and passed through a sieve, and later stewed celery, tender boiled onions and baked mealy potatoes. Beef-juice may be given even during the first year, and in the second year may alternate with chicken or mutton broth. Toward the middle of the year, scraped rare pulp of steak, roast beef, mutton or mutton chop, and finely-minced white meat of poultry may be added to the dietary, except for children of nervous, rheumatic or gouty parents, or with strongly acid urine or eczema. Candy and sweets cannot be defended on the ground that sugar is necessary to a child. The list, then, is milk, eggs, cereals, bread, meat-juice, scraped meat, and certain vegetables and fruits.

Heart Disease in Children--The Syphilitic Factor.

MacKenzie (Intercol. Medical Journal of Australasia) reaches the following conclusions: 1. Pericarditis, and not endocarditis, is the common lesion met with in the so-called pure rheumatic hearts. Indeed, in most of the cases that have died with heart failure, thickening and adhesions of the pericardium, and a healthy endocardium, have been the rule. 2. In the syphilitic patients the endocardium, and in one case the pericardium was affected. 3. In any child showing symptoms of early and rapid heart failure after the initial endocardial attack, a suspicion of lues must be entertained. 4. Early dropsy is characteristic of the failure of the luetic cases with endocarditis, should the patients live long enough, and is probably largely dependent on syphilitic arteritis. Dropsy is not seen in the early failures of pure rheumatic cases. It is seen in the later failures, as the result, probably, of a degenerative arteritis from manipulation, is irresponsive to treatment, and too often ushers in the end.

Migraine.

Kowlesky (Medical Standard) suggests the following in the treatment of migraine:

R Sodii bromidi,	3ii	8	15
Tinct. strophanthi	3ss	2	
Cocainæ hydrochlor,	gr. iiii		
Aq. aurantii flor,	3vi	180	

M. Sig.: One tablespoonful three times a day in milk.

Arsenical Paralysis from the Therapeutic Administration of Arsenic.

Kinsman (Cleveland Medical Journal, March) describes the case of a girl, sixteen years old, who, for violent chorea of five months' duration, was put on five-drop doses of Fowler's solution on June 15, 1900, gradually increased until by July 5th, she

was taking 36 drops daily. Then 10 drops of tincture of iron perchloride were added. The arsenic was dropped for six days, owing to a pustular eruption on the skin, but was resumed on July 11th, "one drop every hour." On the 27th, vomiting and diarrhœa set in, the diarrhœa lasting four days. The arsenic was stopped on the 27th. He saw the patient on that date and found that the chorea had ceased and that both hands and both feet were paralyzed. Dr. Kinsman has counted up the arsenic taken and finds it to amount to 952 drops in 36 days, an average of 23 drops daily or a little more than a fifth of a grain. The patient could not supinate the forearm or raise her hand when it was in pronation—the position which the limb naturally assumes. Limited flexion of the fingers was still possible. The extensors of the feet were paralyzed; the flexors still had some power. There were no reflexes. There seemed to be no paralysis above the elbows or knees. She was not examined electrically. The paralysis began at the periphery. The muscles were atrophied; the sphincters intact. All forms of sensations were intact and there was no tenderness of the nerve-trunks. She was treated with strychnine, electricity, hot baths, and massage for three months. There was no improvement when she left the hospital, and the paralysis continued some months later, which leads him to believe that it will be permanent. Paralysis of the four extremities after acute or chronic arsenical poisoning is not very uncommon. It usually follows the course of a peripheral neuritis beginning at the extremity and traveling inward. The dosage in this case was not extraordinary. In a case of lymphatic leucæmia in a boy aged four years, 45 drops of Fowler's solution were given daily with no bad effects. A woman with pernicious anæmia took 90 drops of the solution daily for four weeks with no bad effects, but improved. He asks: Could the acid in the chloride of iron have been synergistic to the arsenic? The point Dr. Kinsman thinks should have the most emphasis in all cases when arsenic is being administered is to stop its use when there is irritation of the stomach or diarrhœa. He has found no case reported in which neuritis was not preceded by symptoms of poisoning.

A Case of Traumatic Dislocation of the Hip in a Boy Aged Six Years.

Lloyd (The Lancet, No. 4101.) describes a case of a boy while in the act of kicking a ball, slipped and fell heavily to the ground with both legs in a position of abduction. Examination soon after the accident showed that the right thigh was

partly flexed, adducted and rotated inward, or in other words in the position of dorsal dislocation of the hip. The great trochanter was above Nelaton's line and the head of the femur could be felt under the gluteal muscles as the thigh was rotated. Reduction was affected under chloroform by the customary manœuvre (flexion, circumduction and extension of the thigh) on the first trial, the patient was kept in bed a fortnight, wearing a long listen splint and after a week of passive motion was discharged perfectly cured. This accident in the very young is excessively rare.

Acquired Deaf-Mutism.

Mayo Collier (Med. Press and Circular) reports the case of a girl of nine years who as a baby had been bright and intelligent, with good hearing and normal speech. She had suffered from typhoid fever and from measles, but there was no pain nor discharge from the ears in either illness, and at no time in the history of the case had there been any symptom pointing to suppuration in either tympanic cavity. At the age of three the child appeared to be deaf, and had slowly become more so up to the present time. The power of uttering intelligible sounds had diminished, until now the vocabulary was limited to a very few sounds. On examination the external ear was found to be formed, but the auditory canal was long and unusual in its curve. With some difficulty a correct view was obtained, and in each ear, in contact with the membrane, there was found a hard, inspissated mass of cerumen of long standing. This was removed with some little difficulty. The membranes were found to be extremely retracted and somewhat opaque, but otherwise healthy. Politzer's bag was used and the patient dismissed. At the next interview it was evident that the child could hear sounds, and since then the improvement both in hearing and speech has been quite remarkable.

The Complications of Vaccination.

Fox (British Medical Journal, July 5, 1902) states that many of the variations in the development of the vaccine pocks are of comparatively little importance. The incubation period varies. The pocks may develop unequally. The "raspberry sore" is mentioned. This begins as a red elevation at the site of inoculation, quite similar to the papule of true vaccina, but instead of advancing to the vesicular stage, it remains hard, dense, bright red in color, and nodular, looking not unlike a small *naevus*. It remains, as a rule, for some time, but may be dissipated by a mercury and carbolic acid plaster. With regard to an ex-

cessive degree of local inflammatory reaction, some excess may occur after the use of bovine lymph, and in revaccinations. There are also variations in the healing and formation of scars. Of the eruptions not peculiar to vaccination there is a group embracing all types, from the erythematous to bullous and hemorrhagic; and they may accompany local pocks. Various phases of urticaria are met with in the adult. In addition to that rifling miliaria and sudamina some papular and vesicular eruptions are occasionally met with, as after the ingestion of the drugs, somewhat difficult to classify but usually of little significance. Purpura is of very rare occurrence. The very rare disseminated gangrenous lesions, the so-called vaccina gangrenosa is to be carefully distinguished from the local gangrene or necrosis which sometimes occur at the points of inoculation. It is possible that impure lymph containing organisms, such as staphylococci, or streptococci may contaminate the vaccine lesions from the start, and produce systemic poisoning with generalized rashes, or perhaps vesico-pustular eruptions. Such results are generally due to improper methods of vaccination, or to secondary contamination of the points of inoculation. Tetanus is rare. Psoriasis, eczema, and strophulus may occur in close association with vaccination. Syphilis, tubercle, and leprosy may possibly be inoculated at the time of vaccination or by subsequent contamination. The event is extremely rare. Many of the bad results of vaccination are due to imperfect sterilization of the skin and want of protection against the invasion of foreign organisms.

Delusions Peculiar to Inebriety.

There is no one symptom of mental change so constant in inebriety, says the Journal of Inebriety, as the ability to stop all use of spirits at any time. This delusion of free will begins from first use of spirits and grows with increasing intensity down to the last moment of life. Continuous failures and the experiences of years, without a single confirmatory instance sustaining this belief of ability to stop, make no impressions on the mind. On all other topics there may be a general recognition of cause and effect and the lessons of experience, but in relation to drink, this delusion grows constantly. The demand for spirits as a controlling power in the organism is unrecognized, and the mind seems taxed to find reasons for explaining the inconsistencies that come from its use. This delusion of strength, to stop at any time, is encouraged by the friends who believe it to be true, and condemn the patient for failure to carry it out. No matter what con-

ditions or necessities may exist for abstaining, spirits are used, and the patient insists that he cares neither for the taste or effects of spirits, and can stop at any moment. This belief is sincere and emphatic, and should a free interval occur in which no spirits are taken, this is considered evidence of the will power to stop at any point. The use of spirits in conditions where personal interests and that of the patient's family suffer, and where the act is practically suicidal, are explained as a mere lapses which could have been prevented by a mere act of the will. This delusive state is unrecognized by temperance revival movements and many reformatory efforts, where the central object is to awaken the free will which is supposed to be simply dormant. In many instances these very efforts intensify and fix the delusion of free will, making recovery more and more uncertain. It is curious that this most insane faith should not be recognized from the every-day experience of failures to abstain by nearly all inbriates. As a symptom of disease, this is beyond all question, and is really more distinct than any other delusion.

Chronic Proctitis and Its Treatment.

Gant (Post-Graduate) mentions two forms of chronic proctitis, viz., hypertrophic and atrophic. In the first the stools are likely to be frequent and composed of more or less mucus and blood. Fibroid, vegetative or cicatricial changes may be the result, followed sometimes by stricture. In the atrophic form the mucous membrane is dry and fissured and bleeds easily. There is little mucus and the stools are dry and hard.

The diet is important. The patient should avoid cold, acid, carbonate and alcoholic drinks, tea, coffee and tobacco, and greasy highly seasoned foods. Eggs, milk, cream, nourishing soups, broiled steak, potatoes, rice, koumiss, etc., are allowed unless they disagree. Fruits and vegetables may be taken in limited quantity. The intestinal antiseptics are used to prevent and diminish intestinal fermentation. He has found the following satisfactory:

Potass. permang.	gr. 1
Sodii sulphocarb.	gr. 5

M. Sig. One enteric coated capsule t. i. d. one hour after meals.

Betanaphthol,	dr. 4
Bismuth salicylate,	dr. 2

M. et div. in chart, No. 24. Sig. From 3 to 12 powders in 24 hours.

Salol,	dr. 2½
Bismuth salicylate,	dr. 2½

M. et div. in chart, No. 30. Sig. One powder at each of the principal meals.

As a laxative he recommends the salines.

Locally, to reduce inflammation and heal the ulcers various antiseptic remedies in the form of enemata, sprays or ointment are employed, but he prefers semi-weekly enemata of silver nitrate beginning with 40 grains to the pint. He frequently mops the mucosa with a 10 per cent. solution of ichthyol or a paste composed of ½ dram of bismuth subnitrate mixed with an ounce of balsam of peru. An emulsion composed of ½ ounce of bismuth, ½ drachm of iodoform, and 1 pint of olive oil (3 ounces to be used at each injection) is a remedy highly spoken of by Prof. J. M. Mathews.

Etiology of Typhoid Fever.

Thomas Cherry, (Australasian Medical Gazette) writes as follows:

1. Many mild cases of fever are slight attacks of typhoid, and may serve to distribute the contagion.

2. Typhoid fever itself may be a composite disease, or a series of diseases caused by closely allied organisms.

3. While from the bacteriological evidence the *de novo* origin of the disease is not disproved, still a general survey of all the known facts enables us to explain most cases without having recourse to this hypothesis.

4. Typhoid fever at once disappears from a community with the introduction of a proper system for the disposal of excrement and the household refuse. In towns this can only be done by a properly constructed water carriage system of sewerage.

5. This disease is spread chiefly by the contamination of water, milk, and articles of food. In hot countries, at least, flies and dust have a considerable share in bringing about this contamination.

6. The length of time during which the bacilli can exist outside the body is unknown. There is evidence to show that the contagion hangs about old sepsis and contaminated soil for several years.

The Causation and Prevention of Phthisis.

Bramwell (Lancet, July 5th) considers the nature and causation of phthisis, the channels through which the tubercle bacillus is introduced into the human subject, and the manner in which the tubercle bacillus is conveyed from one person to another, and from the lower animals to man. The more important points brought out are as follows: All tuberculous affections are due to the introduction into the body of the tubercle bacillus or its spores. Phthisis is always due to the development in the lung of tubercles and the lesions (inflammatory, etc.) which are associated with, and which result from such develop-

ment and growth of tuberculous lesions.

Phthisis may be either a primary or a secondary tuberculous lesion. So far as is known the tubercle bacillus is never generated *de novo* but is always derived from some previous case of tubercle. The tubercle bacillus is given off from the bodies of human beings affected with tubercle, either in the sputum, in the fæces, in the urine, or in the discharges from tuberculous lesions (diseased bones, joints, skin ulcerations, etc.). The expired air from a case of phthisis does not contain the tubercle bacillus. In cases of phthisis the tubercle bacillus is chiefly given off in the sputum. As long as the sputum remains moist the surrounding atmosphere is not impregnated with the tubercle bacilli; but when the sputum dries and becomes pulverized, the germs readily pass into the air, so that the dust derived from the dried sputum of cases of phthisis is the chief means by which the tubercle bacillus is conveyed from persons affected with phthisis to other healthy human beings. Susceptible persons who inhabit the rooms and houses in which dust impregnated with the tubercle bacillus is allowed to remain and accumulate, run some risk of being affected. Tuberculous disease in the human subject may also be due to the introduction into the body of the tubercle bacillus or its spores derived from the lower animals; in other words, tuberculous disease in the human subject may be due to the introduction into the gastro-intestinal tract of tuberculous milk or tuberculous meat.

Tuberculous milk is a frequent cause of human tuberculosis. Butter made from such milk is also infective. The milk of a tuberculous cow only becomes tuberculous when the milk-producing apparatus (mammary glands, milk ducts, and udders) is itself affected with local tuberculous disease. Infection by such milk is a most important source of tuberculous disease of the mesenteric glands and therefore of generalized tuberculosis; it occurs chiefly in children.

Tuberculous meat is probably also an occasional, but by no means a frequent, cause of tubercle in the human subject. Primary tuberculous disease of the lungs is rarely due to infection by meat or milk. The channels through which the tubercle bacillus or its spores are introduced into the human subjects are (1) with the inspired air; (2) with food or drink; or (3) by means of inoculation.

In man inoculation seems very rarely to produce internal tuberculosis. When tubercle is induced in this way it usually remains local.

Gamphor for Ulcers of the Leg.

According to the Journal of Tropical Medicine, camphor gives the best results in ulcers of the leg. The prescriptions are as follows:

R	Triturated camphor	$\frac{1}{2}$ drachm
	Zinc oxide	$7\frac{1}{2}$ drachms
	Lard	to 6 ounces
M.		
or		
R	Triturated camphor	$\frac{1}{2}$ ounce
	Zinc oxide	3 ounces
	Olive oil	3 ounces
M.		

Discharges and Douches.

Wingrave (Lancet, May 17, 1902) says that the douche or irrigant should have for its object the mechanical removal of morbid secretions, accumulations and foreign bodies or it may be used for antiseptic purposes or for the diagnosis. To be satisfactory in any of these it must conform to certain requirements: 1. It should be solvent of substances to be removed when practicable. 2. The reagent should be itself readily soluble in water and form a clear solution. 3. It should be non-irritating to the mucous membranes and sensitive surfaces. 4. To insure thoroughness it should possess the power of penetrating the surface tissues. 5. It should be miscible—chemically compatible—with the most effective antiseptics. 6. It should be economical in cost and reliably available. The most important of these essentials is the power to dissolve the discharge. It is well to know the character of the discharge, such as catarrhal discharges consisting mainly of the alkaline solution of mucin with globulin and serum albumin. Mucin is readily soluble in a weak solution of alkaline salts, but insoluble in acid, while cells and the serous globulins are soluble in weak solutions of neutral salts. Serous discharges rarely call for special removal except when localized. The pus varies considerably according to its production and its age. Usually it is soluble in a weak solution of neutral or alkaline salts respectively. Cerumen also varies. It is ordinarily soluble in alkaline salts, but it may be so hardened that softening by means of a strong alkaline solution, preferably in glycerin, is often expedient as a preliminary to the douche. Plastic exudation consists chiefly of filamentous fibrin entangling leucocytes, is very difficult of solution and rarely admits of more than a softening process by the neutral and alkaline salts. The same applies to blood clot. The writer gives a tabulated statement of the solvents and precipitants, and points out that many of the salts familiarly used, such as mercurial salts, phenol, boric

acid, etc., are not solvent, but actually coagulants in soluble compounds. The best solution apparently seems to be the sulphate of sodium which has the power of mixing well with and diluting most substances and penetrating the tissues. Calcium chlorid, though not so good, is valuable as a hemostatic douche. Borax (sodium biborate) has the advantage of possessing some antiseptic properties. The strength of these solutions should be varied, not over .5 to 1 per cent. The salts of zinc are largely astringent and should be only used as such. Carbolic acid should be mixed with a solution of sodium sulphate or carbonate to make it more efficient. Peroxid of hydrogen has the great disadvantage of causing rapid effervescence when mixed with pus, and this is extremely awkward. The best disinfectants for douches are precipitants of proteids, and these are such as carbolic acid and biniodid of mercury, potassium permanganate, and so on. When mixed with sodium sulphate they are very good. The author gives a list of formulæ and instructions for the employment of the douche and protests against the old-fashioned syringe, which is an infection-bearing and dangerous instrument. Dr. Wingrave illustrates his own instruments. No apparatus is satisfactory in which the same aperture suffices for filling and emptying.

Local Anesthesia for Major Operations.

W. C. Wood (Brooklyn Medical Journal, June, 1902) has devised a simple and easily extemporized apparatus for the infiltration method. The two-way cork of a Potan aspirator is inserted in an ordinary bottle with a rubber tube extending to the bottom. To one arm of the stopper are attached the tube and the needle; to the other is attached the double bulb of a Paquelin cautery. This gives a constant air-pressure sufficient for infiltrating ordinary tissues, but not a heavy scar. He has done, among others, the following operations: 1. Amputation of the fore-arm, the infiltration being done in a circular ring above the elbow, about three inches broad. Incisions were then made along the course of the median, ulnar and musculospiral nerve and ten drops of a 1-per-cent. cocaine solution injected directly into the nerve trunks. The amputation was done above the wrist. 2. Bassini operation for femoral hernia. 3. Suprapubic cystotomy for retention due to carcinoma of the prostate. 4. Ovariectomy for multilocular adenocystoma in an emaciated woman of sixty-seven; the abdomen was opened by a four-inch incision, the cysts tapped, and the pedicle clamped, cut, and sutured. The only pain was due to traction on the

abdominal walls. 5. Laparotomy for inflamed intraligamentous cyst, aided by chloroform during the delivery of the cyst. The author formulates the following principles that underlie the use of the method: 1. To produce skin anesthesia, intradermal and not hypodermal infiltration is necessary. 2. Intraneural or paraneural infiltration in the trunk of a nerve is equivalent to complete section of the nerve as far as sensory impulses are concerned. 3. Elastic constriction prolongs the anesthesia. 4. Proper infiltration permits the use of very dilute and non-poisonous solutions. 5. All tissues and organs of the body, except skin and nerves, when uninfamed have little or no sensation. 6. Morphine should be given as a preliminary to lessen the psychic pain. 7. Local anesthesia can be supplemented when necessary by chloroform or ether for a brief period with less danger than if the latter were given continuously. The author has had no bad effects from cocaine; one grain is considered within safe limits, and up to four grains may be used when it can soon be released by incisions or a constrictor can be applied.

Nucleic Acid in Tuberculosis.

Vaughan, (Clinical Review, May) believing in a general way in Metchnikoff's theory of phagocytic resistance to disease germs, he considered that anything which would increase the number of phagocytes, or multinuclear white corpuscles, would augment the bodily resistance to disease. Inasmuch as these phagocytes are largely composed of nuclein, he thought that the introduction of nucleic acid into the blood would build up the phagocytes and so improve the individual resistance to disease; and, on experimenting in this way, he found that the number of leucocytes were increased. Hahn, of Munich, and others have since confirmed this observation. He still uses nucleic acid in the early stages of tuberculosis. It is in no sense a specific, but simply a tonic for the phagocytes. The only way to determine which cases are likely to do well on this treatment is as follows: If a drachm of a one-per-cent. solution of yeast nucleic acid is injected under the skin and a leucocyte count of 16,000 or more, is found at the end of three hours, the germicidal action of the blood has been increased, and the nucleic acid treatment is beneficial. If such increase in the leucocytes does not take place the remedy is useless. It fails in a large number of cases. He believes that this is the first time for five or six years in which he referred to this subject; for his first paper on yeast nucleic acid caused such a flooding with ad-

vertisements of various proprietary nuclein preparations, many of which he knew to be worthless, that he swore he would never say another word about it. Nucleinic acid, however, given hypodermically or intravenously with proper care in the early stages of tuberculosis, is a useful treatment in that disease, but it is in no sense specific.

Protection of the Cornea.

Gifford (Archives of Ophthalmology) gives a method of covering the cornea in sightless stumps in certain cases where the corneal tissue remains and is likely to cause irritation, by the use of conjunctival flaps, the Thiersch flap or an epithelial lip flap. In most cases where the conjunctiva is used the membrane is excised from the lower half of the cornea for an area about 3.16 of an inch wide at the sides, and 1.8 inch below. Above this zone the membrane is dissected free from the globe as far as the upper fornix, in the neighborhood of which a cross cut is made through the membrane to allow it to be slid down over the cornea without putting too much tension on it. Three sutures below are generally sufficient, but these should be put well into the episcleral tissue nearly as deeply as in the advancement of one of the straight muscles. Dissecting up the conjunctiva both above and below and sewing it together in a straight line across the center of the cornea has not been successful in his hands. If the conjunctiva is atrophic and the space for an artificial eye be too much limited by the operation just described, he uses the epithelial lip flap, a thin flap shaved from the lip with a razor, or the Thiersch flap, dissecting up the epithelium for 1.8 of an inch around the cornea and scraping the latter (taking special care in the neighborhood of the limbus), the flap is spread out carefully over the cornea and tucked under loose conjunctiva on all sides. It is well to bandage both eyes for twenty-four hours after these operations. The writer has used the Thiersch flap once, but the accumulation of deep epidermis on its surface caused some irritation and he then scraped the skin flap off and substituted a lip flap for it. The author thinks, however, with certain precautions this method might succeed.

Uniform System for the Registration of Mortality Statistics.

According to the Sanitarian the Committee on Demography and Statistics in their sanitary relation to the American Public Health Association, has published a paper in which are set forth its conclusions as to the essential requirements of a law for the registration of deaths and the col-

lection of mortality statistics. An epitome of these provisions is as follows:

1. Deaths must be registered immediately after their occurrence.
2. Certificates of death should be required.
3. Burial or removal permits are essential to the enforcement of this law.
4. Efficient local registrars are necessary.
5. The responsibility for reporting deaths to the local registrars should be fixed.
6. The central registration office should have full control of the local machinery, and its rules should have the effect of law.
7. The transmission and preservation of records should be provided for.
8. Penalties should be provided.

The United States stands almost alone among the civilized nations of the world in that she has no uniform system of registration. The question of a national uniformity of system will be brought by the director of the census to the immediate attention of the governors and Legislatures of the non-registration States, and every effort will be made to procure the introduction and passage of the desired laws.

Use and Abuse of Digestive Ferments.

Hemmeter (Med. News, June 7, 1902) states that the cause of much irrational prescribing in gastric and intestinal diseases is the lack of a correct or logical diagnosis. This can be accounted for by the fact that pepsin and pancreatin are by-products of the large meat syndicates and can be made a source of income if doctors can be duped into using them. What should be done is to train the glands to a better activity by physical methods and the use of physiologic dietetics and when ferments are continually administered the stomach gets lazy, and refuses to do that which is being done for it. It may be taken for granted that whenever free HCl is present in a test meal pepsin in sufficient quantities must be present also. In regard to pepsin on the market, it may be said that all wines are inefficient and some preparations contain ingredients, as pepsin and pancreatin, that cannot act in the same medium. There is rarely any indication for pepsin, as when HCl is absent there is usually plenty of pepsinogen, which only needs some HCl to convert it into pepsin. Pancreatin is completely destroyed in the stomach when HCl is present, leaving but one indication for pancreatin; that is, complete absence or permanent deficiency of HCl and enzyme formation in the stomach. Experiment and experience have shown that when pancreatin is given in these cases the best effect is produced by giving bicarbonate of soda at the

same time. Pankreon is the latest addition and as it resists the HCl of the stomach might be of use in cases of achylia gastrica and chronic atrophic gastritis, with intestinal atrophy.

Progress of Surgery.

L. E. Barnett, in *The Australasian Medical Gazette*, says:

During the Victorian era, surgery advanced, not steadily, but by leaps and bounds. In olden times there were epochs in surgery, the epochs, for example, of Hippocrates, of Harvey, of Pare, and of Hunter. Prominently did these men loom down the vista of surgical history, but they shrank into insignificance when compared with those mighty discoveries of Victoria's reign—anæsthesia and asepsis. With regard to anæsthesia, he emphatically declared that there were still far too many deaths from chloroform, and he believed the reason was due to the fact that chloroform was too frequently administered. Ether, as the safer, should be the routine anæsthetic until something still safer was discovered. Chloroform, administered by an expert anæsthetist, was probably safe enough, and was simpler and pleasanter to administer than ether; but expert anæsthetists were few and far between. In many medical schools the administration of anæsthetics was inefficiently taught, and men went into practice unable to administer anæsthetics properly. Many of them preferred the simplicity of chloroform, but they did not heed sufficiently its dangers. He was of opinion that deaths from chloroform occurred most frequently at the hand of young house surgeons in the public hospitals. He was aware that in a few of the public hospitals, especially those associated with the medical schools, there was an expert anæsthetist appointed to administer and to give instruction in anæsthetics.

There could be no doubt also that a considerable number of men understood the administration of ether, and appreciated its safety and other advantages. It required only a little practice to give ether well. It was far safer than chloroform, and his experience was that it did not make the patient sick for so long afterwards. Ether sickness soon passes off, while chloroform sickness lasted for days, and he had known chloroform sickness to end fatally. Now, to the average man, he made bold to say: "Learn to give ether, and give it freely and give it often. Follow the lead of America, and reserve chloroform for special cases." Then there would not be so many inquests, and patients would not have such a dread of going under an anæsthetic. Medical men had learned that the more careful and

thorough a surgeon was in every detail of antiseptic technique, the better it was for the patient. It did more harm than good to swab and douche healthy living tissues with antiseptic lotions. Bacteriology had in recent times risen from oblivion to a fascinating study of vast dimensions, and of immense practical importance. There was a little army of patient investigators in the different laboratories, digging and delving among diseased tissues, sowing and cultivating the tiny germs, with no thought of monetary gain, for the medical scientist never placed a price upon his work. Let the hope be cherished that among the workers there would soon arise one who would solve the problem of cancer, that great and increasing scourge which has baffled the investigations of so many able pathologists. One of the most brilliant pieces of work in connection with bacteria had been the discovery and use of antitoxins, which had proven so beneficial in certain diseases, notably diphtheria, the mortality from which has been thereby most materially reduced. Another advance of undoubted importance, and one intimately related to the subject of bacteriology, is the employment of the Finsen or blue-light rays in the treatment of lupus, rodent ulcers, and cutaneous diseases. Cases of lupus and rodent ulcer had been cured by the x-rays, as numbers of carefully recorded cases testified. Light, as an illuminant, had also been by so many devices made more and more useful to the surgeon. A distinct advance had been made in the local treatment of hæmorrhage by supra-renal extract. Advances into regions and against diseases previously sacred to the physician had been characteristic of latter day surgery. Wherever medicine alone had shown itself powerless for good, surgery had been summoned to its aid. Consequent upon a spirit of scientific inquiry had been evolved the wonders of brain surgery and of abdominal surgery. What numbers of patients had been rescued from death by modern surgery? As an example of the great progress that had been made in abdominal surgery, he emphasized that invaluable operation which had deservedly become common—gastro-enterostomy—an operation which men and women now walking about in comparative health and comfort had reason to be thankful for. In his advances into new and oftentimes dangerous regions, the surgeon was worsted; but the victories far outnumbered the defeats, and to the credit of modern surgery stood hundreds of operative procedures, established by the experiences of physicians as well as surgeons, as the best and safest remedies for the diseased conditions concerned. He maintained that

any practitioner who aspired to a surgical reputation should pass through what one might call a surgical probation. In conclusion, he referred to the mortality caused by disease in the South African War.

Indications for and Technique of Operation for Nephroptosis.*

The importance of nephroptosis as a factor in producing renal disease and also disease of the female pelvic organs was emphasized by the author who thinks this is not generally appreciated or the utility of nephropexy would be more universally recognized.

Nephropexy may be regarded as a fad of the surgeon by those who have not investigated the subject carefully, but he thought the surgeon the better judge of the necessity for operation because he saw these kidneys exposed on the operating table and could observe the structural change that resulted in consequence of prolonged congestion or obstructions of the ureter due to prolapse.

In a contribution to the gynecological section of the American Medical Association he had shown that nephroptosis causes disease of the female pelvic organs compressing the ovarian vein and interfering with the return circulation from the pelvis. In this alone he thought was to be found justification for considering this a grave condition entitled to be placed beyond the pale of palliative treatment.

Such diseases of the kidney as would result from prolonged congestion of the organ or obstruction of the ureter were to be found in prolapse of the third or fourth degree. Hence in nephroptosis, when long neglected, the kidney may be affected by nephritis, perinephritis, pyeto-nephritis, hydro-nephrosis, pyo-nephrosis, and atrophy. Extravasations under the fibrous capsule and between it and the fatty capsule are also met with in cases of long standing.

Operation was not advised for prolapse of the first or second degree except when the left kidney was found to be in the second degree of prolapse at the time of operation on the right kidney; then the left kidney should be fixed at the same time to obviate the necessity for a second operation later which would surely be required because prolapse of that degree is inevitably progressive.

For nephroptosis of the third degree or beyond, operation is necessary because of

liability to disease of the kidney resulting at any time and because of its influence upon the female pelvic organs.

He thought it unnecessary and unwise to deprive the kidney of its protecting fibrous capsule or to transfix its structure with sutures or muscular bands. Firm adhesion of the kidney with its fibrous capsule intact could be secured if it is held for a sufficient length of time immovably in contact with the exposed muscles of the back. This can be accomplished by inserting the sustaining suture under the fibrous capsule only in such manner that its resisting power is utilized to the best advantage.

Two sutures of silkworm gut are employed; one having three insertions under the fibrous capsule of a half-inch in length each, and the other two insertion of the same length. They are brought out through the structures of the back at the upper angle of the wound just below the last rib and are tied over a small flat pad of gauze to prevent cutting and loosening of the suture loop which would permit the kidney to sag and destroy the chance of adhesion.

These sutures are not removed until just as the patient is ready to get out of bed, three weeks after operation.

The author has operated upon 109 cases by this method in which both kidneys were fixed at the same time, making a total of 136 nephropexies without a death and without any complication following. So far as he has been able to ascertain there have been no relapses in any of his cases.

Gauses and Treatment of Hiccough.

Smith (The Clinique) discusses the causes of hiccough under three heads: (1) Those due to direct irritation of the phrenic nerve, as occurs in the case of mediastinal tumors, aneurisms of the arch, pneumonic or pleuritic inflammation, pressure from pleuritic effusion, etc.; (2) those of a reflex nature, as in diseases of the urinary organs, the uterus and the intestinal tract, and the liver, and the irritation of biliary or renal calculi, irritation of the pharynx, esophagus or stomach, and diseases of the peritoneum; (3) those of central origin, as occurs in hysteria, local, brain or spinal diseases, blood poisoning (as in the fevers, cholera, dysentery, etc.,) after emotional excitement, and from the general anemia of nerve centers after hemorrhage. In the majority of cases, however, the doctor found the condition to depend upon gastric irritation, usually due to the ingestion of acid fruits and drinks and the formation of gas. Various remedies are suggested, with or without alkaline drinks, peppermint water or brandy. Some cases are relieved by hot drinks, others by cold. Strychnin and ni-

Abstract of a paper by Augustin H. Goelet, M. D., of New York, read at the First Annual Meeting of the American Urological Association, at Saratoga, N. Y., June 13th, 1902.

trite of amyl are also occasionally effective. If these remedies fail, he advises resort to opium, morphin or the bromids, while gastric lavage and the ether spray applied to the abdomen or upper cervical region are suggested remedies. The induction of sneezing and the wearing of a tight leather belt are measures with which the writer is not familiar.

A method practiced in France is to place the patient supine over a thick bolster so that the head hangs down and the throat arches up. Rhythmic tractions on the tongue (Laborde) cut short and would often arrest a paroxysm in one of his patients. Extreme cases should theoretically be attended with good results from the use of enemas or infusions of normal salt solutions as well as from the administration of pure oxygen. At present chloroform constitutes the court of last resort, but failing, he would seek permission for section of the phrenic nerve.

Hour-Glass Stomach.

Moynihan (Edinburg Medical Journal, June, 1902) mentions the importance of a sign which he has found of great service in establishing a diagnosis of hour-glass stomach. The abdomen is carefully examined and the stomach resonance percussed. A seidlitz powder in two halves is then administered. On percussion, after about thirty seconds, an enormous increase in the resonance of the upper part of the stomach can be found, while the lower part remains unaltered. If the pyloric pouch can be felt, or be clearly demarcated, the diagnosis is inevitable, for the increase in resonance must be in a distended cardiac segment. If the abdomen is watched for a few minutes, the pyloric pouch may sometimes be seen to fill gradually and to become prominent. In many cases of hour-glass stomach, no single operation will suffice to relieve the symptoms. This is due to the fact that, where a stricture is present in the body of the stomach, a second stricture at the pylorus is also found. The operations that may be practiced are; 1. Gastropasty. 2. Gastro-gastrostomy, or gastro-anastomosis. 3. Gastro-enterostomy. 4. Partial gastrectomy. Pyloroplasty or gastrolisis may also have to be performed in addition to any of the foregoing. The operation selected will necessarily depend upon the conditions found. A reference to the author's list of fourteen cases shows that in twelve the disease was simple: in two, malignant. Of the twelve cases due to simple ulceration, three patients died, one from septicæmia, the result of a large rectal prolapse, which became inflamed and caused bogginess in the whole perinæum, and septic thrombosis

of the inferior mesenteric vein, one from pneumonia, and one on the fourteenth day from a second attack of suppression of the urine. Of the two malignant cases one patient died on the fourth day, showing rapid failure and extreme rapidity of the pulse, and one rallied from the operation, though desperately ill, and survived.

Human and Bovine Tuberculosis.

Ravenel (University of Pennsylvania Medical Bulletin) thinks that we can, in the absence of evidence otherwise, assume that bovine tuberculosis is virulent to the human species and rather believes that we ought not to entirely exclude bovine infection even in those cases where the abdominal organ yield a culture of feeble virulence, as we know nothing about the effect produced on the bovine bacillus by prolonged residence in the human body. It is at least possible, he holds, for it to become radically changed in the human body so that it will show the cultural and pathologic peculiarities of the human type. The author's conclusion is that the human and bovine tuberculosis are slightly different manifestations of the same disease, and that they are intercommunicable. Bovine tuberculosis is therefore a menace to public health, to what extent is impossible to determine, but its existence cannot be denied. In the past the tendency has been to exaggerate, but this does not justify us in belittling the risk, and it is folly to blind ourselves to it.

Ipecac in Dysentery.

Woodhull (Therapeutic Gazette) thinks its beneficial effects are as striking in this disease as those of quinin in malaria. The reasons why the remedy is not always held in the high esteem it deserves are: 1. The disagreeable property of emesis which it possesses; 2. the fact that a great deal of impure or adulterated ipecac is sold for the genuine Brazilian drug, and 3. neglect to administer it properly. He directs that the patient be in a recumbent position and the stomach empty. The epigastrium is then painted with iodine or a mild sinapism applied. Then 10 or 15 minims is given to be followed in ten or twelve minutes by 15 to 30 or more grains of ipecac in pill or paste with a very small quantity of water. Or if preferred a scruple of ipecac and one grain of opium are made into four pills, to make a single dose. No food or fluid is given for at least four hours and if the patient vomits the dose is repeated after a brief interval. The common result is relief of pain, cessation of fever and subsidence of bloody discharge. The usual sign of improvement is a copious, painless, semi-fluid evacuation,

much the color of ipecac powder. He thinks the therapeutic efficiency of this drug due to its action as a nervous stimulant, thereby serving to check capillary leakage.

The Malnutrition of Tuberculosis.

Crandall (Archives of Pediatrics, January, 1902.) concludes an interesting article as follows:

1. Wasting, anemia, and other evidences of malnutrition are constant accompaniments of tuberculosis in children.

2. These symptoms may occur in infants long before local disease can be detected, and occasionally no local signs whatever are manifest before death.

3. In infants, tuberculosis shows a special tendency to be disseminated or to conceal itself in deep tissues, as the lymph nodes. The disease may then run a course identical with simple marasmus.

4. In some cases a period of anemia and wasting is followed by a stage of irregular fever, after which local lesions appear, usually in the lungs.

5. In other cases tuberculosis in children begins with well marked local manifestations, particularly pneumonia. In these, evidences of malnutrition appear promptly, and are usually progressive. The anemia of tuberculosis, whether it appears before or after the occurrence of other symptoms, is a usually simple anemia, and presents nothing characteristic.

6. A diagnosis of tuberculosis cannot be made alone from the character of the anemia or the malnutrition. Persistent and increasing malnutrition in a child without discoverable cause is always suggestive of tuberculosis.

Anemia in adolescents should receive prompt and active attention, for it vastly increases the danger of tubercular invasion, which is particularly common at that period of life.

Nature of Herpes Zoster.

Van Harlingen (Amer. Jour. Med. Sci.) mentions the theory of Abadie, who maintains that the skin affection does not result from an alteration of the peripheral sensory nerve fibers, nor from a medullary lesion, but from a pathologic condition of the arteries and of the vasomotor nerves (sympathetic nerve). This view would explain why the eruption does not always follow the course of the sensory nerves, as the lesions occur along the blood vessels. Thus may be understood also that certain forms of ophthalmic zoster may present grave cerebral complications and may be accompanied by hemiplegia, owing to excessive dilatation of certain cerebral arterioles, which

may provoke their rupture. Again, Head and Campbell have found, in patients who have suffered from zoster, inflammatory and destructive changes in the posterior (sensory) ganglia of the cord and in the Gasserian ganglion. From thence the inflammation and degeneration may extend along the nerve trunks. It may be noted in referring to the brain symptoms in connection with ophthalmic zoster, that the third division of the trigeminal is connected with cells in the Gasserian ganglion. If the cause of zoster lies in a disorganization of certain nerve cells or nerve fibers by the toxin of a specific germ, there is some reason for admitting that the same agent may give rise to inflammatory symptoms in the pleura, peritoneum, articulations or viscera, which at times complicate zoster. Zosteroid eruptions are not frequently observed in cases of poisoning from coal-gas, after the ingestion of arsenic, following injuries to nerves and under other conditions. He concludes that true herpes zoster is a specific, infectious and possibly contagious exanthem, characterized by lassitude, chills increased temperature and neuralgic pains, which in most cases develop along certain nerve paths or metameric areas. After a few days, the eruption shows itself and runs through a fixed cycle of development, acme, and decrudescence.

Pointers in [the Treatment of Scarlatina.

The Editor of the Medical Council gives the following practical hints for the treatment of scarlet fever:

A solution of boric acid is a good throat antiseptic. This may be used as a gargle or a spray, or it may be put up in the form of a lozenge flavored with peppermint or some other agreeable substance, together with sugar, for the use of children.

A solution of permanganate of potassium is one of the most efficient antiseptic nose and throat sprays that can be used in scarlatina or any other form of sore throat. Its only drawback is that it becomes extremely objectionable to many people after two or three days' use.

One or two per cent. menthol in oil or vaselin will ease the itching of scarlatina if applied to the affected part at suitable intervals.

One great necessity for throat-spraying or irrigation in scarlatina is to guard against the extension of the inflammation into the Eustachian tubes, and the subsequent development of otitis media, and possible deafness.

Earache in scarlatina should receive immediate attention. Apply local heat, using either the hot-water or salt bag. Cocaine may be dropped in the ear to relieve pain,

and admit of more thorough examination with the speculum. If the tympanic membrane is opaque and bulges, it should be freely incised, to relieve the tension by giving free drainage to the imprisoned pus, and should be irrigated two or three times daily with a hot antiseptic solution.

The urine of scarlatinal cases should be examined daily for evidence of acute nephritis. When this occurs, counter-irritation should be applied to the lumbar region, either by means of sinapisms or dry cupping, and the skin and bowels should be stimulated to unusually free action. If hot air is used to promote sweating, the patient's head should not be included, but should be left free to breathe the normal air of the bedroom.

The "Open Method" of Treating Exceptional Cases of Septic Arthritis of the Knee.

Whitehead (British Medical Journal, June 21, 1902) reports a case of septic arthritis of the knee following an operation for removal of the internal semilunar cartilage. Although all aseptic precautions were observed, symptoms of infection developed within five days. Local pain and constitutional symptoms manifested themselves, the body temperature rose to 103 deg. F., and the condition of the patient became critical. The details of the second operation, performed the fifteenth day after the removal of the cartilage, were as follows: 1. A transverse incision was made through the skin over the centre of the patella. 2. The patella was sawn across in a line corresponding to the skin section. 3. The joint was freely flexed and thoroughly opened, and the crucial ligament divided. 4. All exudations on the surface and in all the cavities of the joint were carefully scraped away with a surgical spoon, and immediately afterward all the surfaces were freely swabbed with lint saturated with turpentine. 5. The whole of the exposed surface, and every crevice, was gently packed with iodoform gauze. 6. With the joint well flexed (beyond a right angle), layers of wood wool were so adjusted by bandages that they not only afforded a compact support to the back of the knee, but also acted in firmly retaining the knee in an acutely-flexed position. The result was immediate, all pain disappearing and the temperature falling to normal. After two days the joint-cavity was daily syringed out with antiseptic solution and packed with iodoform gauze. Granulations began to form at once, and on the fifteenth day the leg was straightened. The articular cartilage disappeared by a process of molecular disintegration.

Gastric Ulcer.

Futterer (Chicago Med. Record) lays less importance upon the disturbance or stoppage of the local circulation as a cause of gastric ulcer than most authorities. From a series of experiments he is convinced that the lessened volume of blood, while it may delay healing, is hardly likely to cause the ulcer. The writer was able to produce typical ulcer after resecting a piece of mucous membrane only when he also succeeded in producing hemoglobinemia. This corresponds with clinical experience which shows that persons suffering from chlorosis or secondary anemia are most likely to have ulcer of the stomach. The author calls attention to the fact which is generally overlooked that carcinoma frequently develops from ulcer in this locality and especially at the pyloric extremity of the stomach. Dr. Futterer thinks that in the diagnosis of gastric ulcer we should not lay too much stress on the so-called classical symptoms, the well localized pains which come after meals, and the hemorrhage appearing by mouth or by rectum. The pains are by far the most constant symptoms of the two, and he is inclined to suspect a gastric ulcer if the patients are chlorotic, or have secondary anemia of some kind, and particularly if they are afraid to eat solid food on account of the soreness and pain which it produces. It is better to recommend ulcer treatment in such cases than to wait for a hemorrhage to confirm the diagnosis. He recommends early operation in doubtful, complicated or intractable cases.

Hygiene of the Mouth.

Goldsmith, in Pediatrics, remarks that good digestion is one of the first and most fundamental factors upon which good health is based. To be properly digested the food must be introduced into the stomach in a thoroughly comminuted state, and without good teeth this is impossible. The author explains in detail the structure of the teeth and the diseases which attack them, the latter being divided into two classes—those which attack the teeth themselves, causing cavities and attendant troubles, and those which attack the alveoli or "sockets" of the teeth, producing "loose teeth." Prophylactic treatment cannot be begun too soon. During pregnancy the expectant mother should take food rich in lime salts, as whole-wheat bread, cracked wheat, oatmeal, etc. After the birth of the child every effort should be made to nourish it at the breast. If this is impossible, give cow's milk, and as soon as the child begins the use of solid foods those rich in lime salts should be selected. The mouths of infants should be cleansed by the

nurse by carefully introducing the index finger, around which a piece of clean linen has been wrapped and immersed in a solution made by dissolving a half-teaspoonful of boric acid in a half-pint of boiled water.

The cloth should be dispensed with as early as possible and a proper brush substituted. As soon as the child is able to handle the brush it should be instructed in its use and carefully watched to see that the habit is acquired. The teeth should be brushed after eating, and before going to bed, as the secretions of the mouth are more acid at night. A toothbrush should be made up of irregular tufts of bristles, slightly curved to conform to the contour of the dental arch, and converging to a point, and the brush itself be small enough to reach every point of the mouth. In brushing lay the side of the brush against the teeth, the bristles pointing to the apices of the roots, and turn the brush toward the cutting surface of the teeth. This will cause the bristles to spread out and penetrate the crevices between the teeth, brush the more exposed surfaces, and give the gums a healthy massage. It is a good rule to devote three minutes by the clock to the operation, and to see that the back of the wisdom tooth receives a proper cleansing. Tooth powder should be used every time the teeth are brushed. A good antiseptic, antacid mouth wash will destroy or render innocuous bacteria which remain after the brushing. It is also well to use dental floss silk between the teeth. The services of a dentist should be sought every six months for the purpose of examination, for some tartar will form and some cavities arise in spite of all we can do. The cavities in children's teeth should be filled as soon as they appear for the following reasons:

To prevent pain; to preserve a proper masticatory surface; to secure retention of the temporary teeth until the proper time for their exfoliation and bring about a proper development of jawbone, so that when the permanent teeth appear they will have sufficient room to erupt in their proper positions. Thus the child will have a regular arch, which it is hoped, by following the directions presented in this article, it will be able to retain through life.

The Value of Widal's Serum Reaction in the Diagnosis of Typhoid Fever in Children.

Thursfield, in *Pediatrics*, concludes from his experiences that in children's diseases a positive Widal reaction is trustworthy evidence of the presence of typhoid fever; that a negative reaction later than the tenth day of an illness is strong but not absolutely convincing evidence of the absence of

typhoid fever; and that repeated negative reactions are trustworthy evidence that the case is not typhoid at all. So far from agreeing with Wentworth, the writer believes that the test is at least as reliable in children as in adults, and, indeed, of even greater value. In the first place, one can generally exclude in children the occurrence of a previous case of typhoid. In adults this has been a frequent cause of mistakes, for the reaction sometimes lasts months, or even years, after an attack of the fever, and so a positive reaction is obtained where there is no typhoid fever present. This source of error is far less likely to be active in children. Secondly, the author is inclined to think that the reaction occurs earlier in children than in adults. Again, there is among children a fever which, while strongly resembling typhoid fever, does not run the course nor present quite the symptoms of typhoid. It was formerly supposed that in many instances the disease was an abortive typhoid. The use of the Widal serum reaction has, however, shown that few of these cases are true typhoid. In fact, it has introduced certainty where there was confusion, and promises to give even better results than have been already attained, when we have learned more of the conditions which regulate it.

Localization of the Mental Faculties of the Prefrontal Lobe.

Charles Phelps in the *Am. Jour. Med. Sciences*, 1902, states from personal observations of frontal lesions verified by necropsy number 46, and from an entire series of 295 cases in which the history was supplemented by necropsy, he makes the following generalizations:

1. In every instance but two, in which consciousness was retained or regained and the mental faculties were not perverted by general delirium, laceration involving the left frontal lobe of the brain, was attended by default of intellectual control, and the lesion was usually, if not always, of the prefrontal region, and implicated either its superior or inferior surface. Subcortical disintegration, or deep or extensive laceration of the cortex, was specially characterized by abrogation of mental power, and superficial laceration by aberration in its manifestations. Abrogation of mental power seemed to be proportionate to the extent of the lesion rather than to its situation in the prefrontal region.

2. In every instance in which laceration was confined to the right lobe the mental faculties were unaffected, except as they were obscured by stupor or delirium occasioned by coincident general lesions.

3. Compression or contusion of the left lobe only exceptionally produced specific intellectual disturbance.

The Treatment of Typhoid Fever.

The Medical press & Circular editorially discusses this disease. The writer says, "there are certain diseases that seem ever to be in the experimental stage of treatment. An evidence not alone of the restless nature of the physician of today, but also of the progress of scientific knowledge. Of this latter class is typhoid fever, a disease which exemplifies in a peculiar manner the prevalent theories of disease. To-day we recognize that it is due to a toxin that shows a marked predilection for the adenoid tissues of the small intestines, as strychnine and other such poisons do for the muscle tissue. In typhoid the toxic products of Eberth's bacillus are as clearly recognized by their effects as are effects of elotrium or pilocarpine. But how does the toxin producing bacillus gain entrance to the body. In the pre-bacteriological days the text-books told of the poisonous vapors of decomposing products absorbed through the pulmonary air-cells. We then found the ground shifted and adapted to meet what was considered the requirements of the discovery of the bacillus. The alimentary canal was discovered to be the site of infection, and the introduction of the bacillus was accounted for by want of proper cleanliness—the soiled apparatus and stained linen not having been removed prior to their being dried up and as such becoming sources of infection. Withal some physicians were not satisfied with all this explanation, and a diligent search commenced for the primary colony of the germ of the disease, and naturally enough an endeavor to attenuate or destroy it. From these researches Dr. Wasdin concludes that the primary germ colony of disease cannot be considered as occurring in the intestinal canal, but to be normally located in the respiratory tract—a theory which recalls that of the past, and one which in part accounts for the rare case of typhoid in which the clinical symptoms without the normal pathological conditions are not present. According to Dr. Wasdin's report, the bacillus toxin from the blood current gives rise to all the well-known terminal expressions: infection of the intestinal canal, the serous membranes, the bone marrow, and so forth. To reach the affected area in the lung an atomised solution of acetozone is used, and the same drug is given in capsules three times a day. When the temperature threatens to be dangerously high, cold sponging is recommended. The good effect of the treatment is stated to be marked from the first by an in-

creased secretion by the kidneys, a decided lessening of the malodorous character of the stools, and a distinct lessening of the number of the stools, which become sterile. By the combined action of the oral administration of the drug, and its inhalation as an atomised or cloud fluid, the advocates of the therapy claim that they reduce the possibility of gaseous fermentation and its concomitants, hemorrhage and perforation, and at the same time the destruction of the secondary infection of the canal by the typhoid organism, thereby averting further toxemia by the absorption from the alimentary canal. The germicide is therefore to be directed against both the primary colony in the respiratory tract and the secondary expression in the alimentary canal. The benzoyl-acetyl-peroxide, which has long been known as benzozone, the antiseptic used by Dr. Waddin, is a non-poisonous product of the aromatic series, prepared from benzoleic acid. The antiseptic and non-poisonous properties of the chemical are well known, and its use in toxæmias can be tentatively recommended. The treatment attacks the disease on an entirely new principle, the theory of which has much to commend it, not the least of which is the innocuous character of the therapeutic agent employed.

The Treatment of Pneumonia.

Finlay (Scottish Medical and Surgical Journal, April, 1902) sums up his views in the following propositions:

1. No routine drug treatment is of any practical value.
2. Antipyretic drugs and all depressing lines of treatment are especially to be avoided. This includes nauseating drugs, such as tartar emetic and even digitalis; the latter depresses indirectly, because it causes impairment of appetite and nausea (if not actual vomiting), and so interferes with nutrition, and this again leads to heart failure.
3. A supporting and—in the widest sense—stimulating line of treatment will generally be attended by the best results. Alcohol should not, however, be prescribed in a routine way—when it is clearly required by the state of the pulse (especially), the temperature, and the tongue, it is invaluable, and the quantity given should be in proportion to the intensity of the conditions calling for its use. Patients with unimpaired constitutions, and especially the young, generally need none, and are better without it.
4. For relief of pain in the side, nothing is so good as leeching.
5. In presence of high temperature, refrigeration to the surface by the icebag lo-

cally, or by cold water generally, is desirable; the latter is specially indicated, and should be applied vigorously if delirium is a complication.

6. In the case of vigorous subjects, where cyanosis is present, and there is obvious engorgement of the right heart, general blood-letting may with propriety be practised.

The Treatment of Wounds.

E. D. Martin (New Orleans Medical and Surgical Journal) sums up the treatment of wounds as follows: 1. Cleanse the hands by washing with soap (that manufactured by process of boiling is the only soap free from germs), and scrubbing with brush for ten minutes; then cleanse the subungual spaces, scrub again for five minutes, wash or scrub in alcohol one minute, wash in permanganate and oxalic acid solution, or solution of chlorine, for five minutes. These solutions are not necessary for the ordinary handling of wounds, and can be substituted by alcohol and bichloride 1:1000, and afterward rinsing in sterilized water. 2. Prepare the skin by scrubbing with soap and brush five minutes or more, cleanse with alcohol, and wash off with bichloride 1:1000. Cleanse the wound with peroxide and antiseptic solutions; dress according to the character of the wound. 3. Instruments are best prepared by scrubbing with soap and water and sterilizing in a 1 per cent. solution of cooking soda for at least five minutes. 4. Towels, dressings, etc., are prepared by sterilizing for at least twenty or thirty minutes. Moist heat (steam) is best, as it is more penetrating.

Gonorrhoea of the Prostate.

Vanderpoel (Boston Med. and Surgical Journal) says that in 190 dispensary and private cases it was present in 36 or 39.7%. The Thompson two-glass test was not frequently sufficient to detect this disorder. In the great majority of cases the symptoms of posterior urethritis were more or less marked. Rectal exploration and examination of the fluids obtained by massage should be made in order to make the diagnosis. The presence of many leucocytes indicates posterior urethritis and prostatitis. After voiding the urine the meatus should be cleansed with a quarter to a half per cent. solution of protargol, and then with the patient in the horizontal position the anterior urethra should be filled with a half to a three-quarters per cent. solution of cocaine, and then after three or four minutes the protargol should be injected into the bladder by means of a large urethral syringe rather than by the irrigating ap-

paratus. Usually from 200 to 400 grams were employed, and then the patient was allowed to void it. The treatment should be instituted if possible within the first day or two. Instrumental massage was both unnecessary and dangerous; it was far better to use the finger and make the massage light in the acute cases. He was of the opinion that epididymitis was not more common after such irrigation treatment.

Edema in Anemic States.

Houston (British Medical Journal, June 14, 1902.) says, the main points of interest from my observations are: 1. The absence of loss of weight in anemic conditions, and the fact that the patient seldom seemed emaciated, are mainly due to the fact that there is abnormal accumulation of fluid in the blood and tissues. If this excess of fluid were deducted it would probably be found that in these, as in other chronic illnesses, there is a progressive loss of weight in proportion to the severity and duration of the disease.

2. In the cure of such anemic conditions, especially chlorosis, the first stage seems to be the getting rid from the blood and tissues of this excess of fluid.

3. A gain of weight in a case of pernicious anemia under treatment, and without any improvement in the hemoglobin, is to be regarded as an unfavorable sign, indicating dilution of the blood and consequent escape of serum into the tissues. It may, however, be a critical phase of the disease, and indicate the first step toward the concentration of the blood. Immediately after this sudden increase in edema there is either a marked improvement or the patient dies.

4. The edema of anemic conditions seems to result from a hydremic plethora of the blood, and is somewhat different in origin and nature from the edema usually found in Bright's disease.

5. Careful observation of anemic conditions in the manner indicated, namely, a record of the weight and hemoglobin value of the blood, may furnish very interesting results. The points to direct attention to are the occurrence of hemorrhages (epistaxis, etc.), edema, diarrhea, and profuse sweating.

The writer's observations convince him that these symptoms are often the result of dilution of the blood, and may be merely Nature's method of counteracting the excessive and abnormal volume of the blood.

Knee-Jerks.

Turner (Journal of Nervous and Mental Diseases) maintains that the condition of knee-jerks after experimental transection

of the spinal cord in monkeys is not constant; The higher the level of the transection, the greater the likelihood of their being temporarily diminished or abolished. These conform to the experimental data of Rosenthal and Mendelsohn and of Gad and Flatau in dogs. No such differences according to level are found in transections of the human spinal cord; all complete transections above the lumbar enlargement lead to abolition of the knee-jerks, more probably of a permanent character. Temporary abolition of knee-jerks, sometimes after prolonged periods, may follow incomplete anatomical transection, although the other co-existent phenomena point to a complete physiological lesion. In man, as experimentally in monkeys, the knee-jerks may be abolished, but some true reflexes persist, such as the plantar and the superficial anal reflexes. Accepting the view that the state of the knee-jerk indicates the degree of the neuro-muscular tone, if some other muscular action dependent upon "tone" is found to be abolished in spinal transection as well as the knee-jerks, it may be legitimately argued that neuro-muscular tonus is impaired or abolished in physiological transection. Such other atonic paralysis is to be found in "yawning" of the anus, which has been described.

The writer, therefore, would conclude that in spinal transection in man, and in high transections in monkeys, actions dependent upon neuro-muscular tone are permanently or temporarily abolished; but that true reflex movements are not impaired. The variations in the phenomena of lesions at different spinal levels in dogs and monkeys, the temporary effects as regards the knee-jerks and temporary abolition of knee-jerks in incomplete lesions in man, would preclude the general application of Bastain's theory, for there is nothing to negative the view as yet recorded that the mechanism which produces loss of knee-jerks in man, or their temporary abolition in lower animals, is not to be found in the spinal cord itself. The explanation of the discrepancy which exists between results of transection in laboratory animals may be explained by the greater autonomy of the spinal segments in maintaining neuro-muscular tonus as we descend the vertebrate scale.

Somnolence Caused by an Ear Lesion.

W. G. B. Harland, in the *St. Louis Med. and Surgical Journal*, reports an unusual case.

A boy thirteen years of age complained of a tendency to sleep at all times. Without feeling tired or out of sorts in any way, he would go to sleep whenever his atten-

tion was not aroused by action. There was no vertigo, tinnitus, nausea, or headache. The only thing found after a careful physical examination was a small impaction of cerumen in the left ear. This was readily removed and a few drops of fetid pus found behind it, and the membrana macerated with a large perforation of the lower posterior quadrant. Within a day, without treatment, the unnatural sleepiness disappeared. Later, with any return of discharge the sleepiness also returned.

The writer is inclined to ascribe the symptom to either meningeal irritation from the absorption of pus, or possibly to pressure upon the labyrinth fluid.

Tobacco Catarrh.

According to the *London Medical Press* this ailment, cold in the head, represents a group of symptoms common to several very different conditions. The most prominent symptoms, nasal catarrh, with more or less obstruction of nasal breathing and running at the nose, is associated in most instances with a disagreeable feeling of tension in the forehead due to implication of the ethmoidal and frontal sinuses. Sometimes, as in hay fever, the affection is dependent upon the presence of a special micro-organism; it is much more frequently caused by an extension upwards of gastric catarrh, which first gives rise to catarrh of the pharynx with dryness and soreness of the throat, and then attacks the mucous membrane of the posterior nares. Attacks presenting this sequence are invariably of gastric origin, and should be treated accordingly. There can be no doubt that a proneness to naso-pharyngeal catarrh is established by the habit of tobacco smoking, especially in the form of cigarettes. In sensitive subjects the smoke provokes a condition of chronic irritation which is fanned into a flame by comparatively slight exposure. Persons addicted to habitual cigarette smoking, it will be noticed, complain of huskiness, and the voice has a muffled tone due to engorgement of the mucous membranes. When the smoke is inhaled there is in addition a troublesome short dry cough, testifying to chronic irritation of the larynx. Such cases are very refractory to treatment, because the sufferer is rarely willing to consent to the removal of the source of irritation.

The Medical and Surgical Aspects of Gangrene of the Lung.

F. Packard (*American Journal of the Medical Sciences*, March, 1902,) describes the case of a man, 42 years of age, who suffered for 4 months from cough and profuse expectoration, pain in the right side

of the chest and impairment of the percussion note below the third interspace on the right side. The sputum was mucopurulent and greenish, but did not contain tubercle bacilli. The blood was almost normal. There was very little fever until late in the course of the disease, when he began to have irregular rises of temperature. He then began to expectorate small clots of blood, became emaciated, and retraction of the interspaces on the right side could be made out. He was then transferred to the surgical wards with a diagnosis of probable bronchiectasis, probably associated with pneumonic consolidation in the lung. An interesting symptom was the fact that, when the patient lay on the left side, the cough was aggravated, and in addition there was some clubbing of the ends of the fingers and toes. The patient also had myxedema over the whole chest. The odor of the sputum was extremely offensive, and was characteristic of bronchiectasis or pulmonary gangrene, and therefore a diagnosis of gangrene of the lung secondary to bronchiectasis was made.

The doctor calls attention to the danger of exploratory puncture, which he believes should be used only at the operation. The operation consisted in the excision of a portion of the seventh rib, and showed at once a gangrenous area of the lung. This appeared to be single, and was gently swabbed out with a piece of gauze, a rubber tube inserted and a dressing applied. In these cases the character of the operation is influenced by the presence or absence of adhesions. If adhesions are absent, the ribs may be resected for a considerable distance in the search of some local adhesion, or the lung may be stitched to the parietal pleura. When no adhesions exist, the lung should never be grasped and opened, because it almost invariably gives rise to acute pleurisy. The subsequent course of this case was unfavorable, and the patient died on the twentieth day after operation. The autopsy showed a low grade inflammation of the whole of the right lower lobe of the lung surrounding the gangrenous area.

Relation Between Poverty and Mortality.

Wormley (Medical Fortnightly) says with all due credit to the advances in sanitary science and the efforts to apply them, they play but a secondary role in diminishing the death rate. The "Quartier Latin," in Paris, inhabited as it is mostly by the poor, shows a mortality of 1 in 15; whereas in the 2nd arrondissement, where the richer classes reside, only 1 in 65 dies. Throughout France, persons in easy circumstances die at the rate of 8.3 per 1,000

between the ages of 40 and 45, whilst amongst the poor the rate is 18.7 per 1,000. The same is true of infant mortality. Among the rich infant mortality in the first year of life is about 80.45 per 1,000 deaths, against 150 in the general population in England. According to Stille, the infantile death-rate in Berlin is sometimes as high as 500 per 1,000, as a direct consequence of low wages. In our own country, Ansel has shown that between 1 and 5 the death rate is 46.84 per 1,000 among the richer classes; 113.69 per 1,000 among the children of the general population. According to the same author, about 142,130 human lives have been lost in one year in England and Wales alone in consequence of poverty and its concomitant features. On the other hand, in New Zealand, with its high labor wages and cheap provisions, especially meat (there are no beef trusts as yet!), the death rate is only 12½ per 1,000 against 22.2 per 1,000 in London, the model city of sanitary improvements. This is especially convincing in view of the fact that the workmen in New Zealand are no more F. F.'s than their antipodes, and yet they live twice as long as they would in London. With the exception of a few trades, as cotton beating, carding of silk cocoons, white lead grinding and one or two more, occupation as such has little influence on the health of the individual, but rather the scale of his wages. The author properly concludes: "That if we desire to lower the death rate in any notable degree in America, we must no longer content ourselves with drainage schemes or charitable plans for building model houses for a few. To permanently lessen the death rate it is necessary to lessen that poverty which meets us face to face at every turn, even in our wealthiest States."

Remarks on the Subsequent History of Children Born Whilst the Mother was Insane.

Tredgold (The Lancet, No. 4107) mentions some very interesting facts. Of thirty-eight children born of mothers insane at the time, thirteen lived and grew up sound in mind and body while the balance died within the first three years of life, and those that survived for a sufficient time exhibited some mental affection. Generally speaking 50 per cent. of these children die during the first year of life. Nevertheless this heavy death rate cannot be connected outright with the insanity of the mother. If we divide all the material into two classes, viz: simple (gestational), insanity of the mother and insanity as a family trait, with or without the presence of alcoholic or consumptive inheritance, we shall see that the

great majority of the first class survived, while by far the greater of the second class perished. In other words, simple insanity or gestation cuts little figure in the child mortality, but a mother of the actual insane stock tends to bear a perishable type of child. This species of insanity of the mother need not be inherited, but may be acquired as a result of alcoholism or tuberculosis. In any case it is not gestational insanity in the strict sense of the term, in which the alienation is believed to be brought about solely by the pregnant condition.

To conclude, the mental and physical condition of the child is in no wise influenced by the fact that the mother was insane during pregnancy; nor by the type or duration of the attacks of insanity. On the other hand the state of the child is the direct result of actual morbid heredity.

To Remove Dandruff.

According to Merck's Report, the remedies which have been found to be most serviceable in the treatment of dandruff are resorcin, tannoform, salicylate acid and boric acid. The following mixture is suggested as being the most efficacious:

R	Resorcin,	3i
	Tannoform,	3i
	Acidi salicylate,	gr. v

M. Dissolve the powder in three ounces of alcohol and one ounce of water and filter.
Sig.: Apply locally to the scalp.

Or:

R	Resorcin,	3i
	Acid borici.	3ss
	Aquæ,	3v

M. Sig.: Apply locally to the scalp.

The foregoing ingredients may be incorporated with an ointment if desired, such as aquæ unguentum rose (cold cream), adeps lanæ hydrosus, petrolatum, etc.

Rheumatic Nodosity in Infants.

Herbert Josias, in the Medical Press, says "there are two varieties of rheumatic nodosity: The first is dependent on chronic rheumatism, and is, as a rule, independent of articular inflammation; the second is an epiphenomenon of acute rheumatism, and forms with chorea one of the most curious sequelæ of infantile rheumatism. He describes two cases of the latter disease. The first, a boy of 11 years, had nodosities on the pinna of the ear, which is an unusual situation, and in all 60 to 70 on the upper extremity of the right side, 80 on the left side, 60 and 70 on the right and left lower extremities. In size they varied from that of a grain of hempseed to that of a lentil and were slightly painful on pressure.

In the second case, a boy of 13, the no-

dosities were numerous, easily movable, and attached to the deeper tissues. In both cases the heart was affected. Both recovered under treatment by sodium salicylate. The correlation of the attack of nodosities with cardiac disease in childhood requires of the physician a careful examination of the heart in every case of the disease. Endocarditis is the most common form of cardiac lesion found in these cases, its usual site being the mitral valves. The most plausible hypothesis of the disease is that which likens the subcutaneous nodosity to the nodosity found on the mitral valves in endocarditis. In both cases the cellular proliferation is due to the same cause. It is, however, strange that the appearance of the endocardial nodosities and of the subcutaneous ones not synchronize. Endocardial nodosities may exist without any subcutaneous ones appearing. But subcutaneous nodosities are never present without a similar condition coexisting in the endocardium.

Results of Operation in Sixty Cases of Malignant Disease of the Breast.

A. Marmaduke Shield, in the London Lancet, comes to the following conclusions from a careful survey of sixty cases of malignant disease of the breast: That the risk of removing cancer of the mammæ by extensive operation is small and should not amount to more than one or two per cent.; sepsis is preventable and when it occurs is due to the surgeon. That early and free removal gives prospect of years of freedom, and, in good percentage of cases, of good health and enjoyment of life. That the cases which do badly are: 1. Soft, rapidly-growing cancer in young and vascular women; and 2. Cases of long continuance before operation, where skin and cervical glands are widely infected. That in certain cases visceral cancers and cancers in the liver coexist with, or rapidly follow operation, and the explanation of these is uncertain. That the practice of early exploration by incision of small nodules and durations in the breast is of the first importance and should be strongly urged upon the profession generally, especially upon those in general practice who so often see these cases in their early beginnings and upon whom the great responsibility of prompt diagnosis falls. No one should undertake an operation for mammary cancer unless he is capable, and has sufficient operative experience to remove all lymphoid tissue from the axilla; the leaving of infected glands toward the apices of the axillary spaces being a common source of failure in the results of this operation. The

prognosis is still dubious, as we sometimes get just the opposite result from that expected. Operate early and extensively.

Some Remote Diseases Arising from Tonsillar Infection.

Dr. Forchheimer, in a paper read before the American Medical Association, said that it had been a long-established fact that the tonsils might be the seat of infection in remote parts of the body. Among such infections were recognized diphtheria, erysipelas, tuberculosis, pneumonia, scarlatina, measles and possibly acute articular rheumatism. It was unusual to find bacteria present in the tonsil; a rapid blood-current, resistance of the epithelial coat of the tonsils, or possibly an active phagocytosis, might explain this fact. In most cases of tonsillar infection the lymph-nodes at the angle of the jaw were swollen, a fact which might suggest the possibility of bacteria being taken up by the tonsils. Having gained an entrance, bacteria were carried into the general circulation by the lymph or the blood stream. Several authorities were quoted to show that bacteria had been found in the blood. The remaining factor necessary for remote infection was a locus minoris resistentiæ. Toxin absorption was also capable of giving rise to remote affections. A case of typical tonsillitis followed by appendicitis was reported. After the tonsillitis had run a normal course, there was a sudden rise of temperature accompanied by severe abdominal pains in the region of the appendix. McBurney's point was sensitive and vomiting was severe. The case received appropriate treatment and recovered without operation. The appendix, being rudimentary in structure and function, formed a locus minoris resistentiæ. Another case of appendicitis following tonsillitis was reported in which operation was resorted to. The patient developed signs of nephritis, endocarditis and pyelitis in rapid succession. The septicemic symptoms occurred so soon after the operation it was thought that the infection was in all probability not from the appendix. He also reported five cases of jaundice following infection of the tonsils. In each case the jaundice appeared in less than ten days after the infection of the throat. All gastro-intestinal disturbances which might give rise to jaundice had been carefully eliminated.

Some Remarks on the Action of Purgatin.

Marshall, in the Scottish Medical and Surgical Journal, says that it seems to be a slow but ordinarily a sure purgative, with no serious after-action. Although it sometimes produces colic the pain is

usually mild. It should not be given in cases in which renal trouble exists, as it produces some irritation of the kidney when used in large doses. Its main use is as a mild laxative, but the author does not believe it is any better than some crude drugs. Chemically it is said to be anthrapurpuria diacetate. The advantages claimed are its purity, mild action, tastelessness, freedom from ill effects, and a constant action. The dose is from $7\frac{1}{2}$ to 15 grs., either in liquid or tablet form. Physically it is a yellowish brown powder, microcrystalline, which melts at about 175° deg., insoluble in water or dilute acids; slightly soluble in hot water, alcohol, ether, or chloroform; easily soluble in glacial acetic acid or xylol. When purgatin is given to a patient they should be warned that it produces a red color of the urine.

Some Phases of Inflammation of the Appendix.

Treves (British Medical Journal, June 28, 1902) states that the greater proportion of cases of appendicitis recover spontaneously, and it is probable that the general mortality of the disease—if examples of all grades be included—is not above 5 per cent. Operations carried out during an acute attack are attended with a risk of life which is considerable, and which is probably expressed by a mortality of over 20 per cent. Certain hospital records and collections of cases appear to place the death-rate even higher than this. It must be remembered that relapses may occur after operation carried out during the acute stage. The removal of the appendix during the quiescent period is attended with a very trivial risk, which may be expressed by a mortality of 1 in 500. He thinks that our knowledge of the pathology of the disease and its general mortality will not sanction the practice of opening the abdomen in every case of appendicitis as soon as the diagnosis is established. Immediate operation is demanded, at the earliest possible moment, in all ultra acute cases. These include those very hopeless examples which present from the onset the phenomena of intense infection, and in which it is evidenced that a very large dose of poison has suddenly been introduced into the system. Death may occur in thirty-six or forty-eight hours. There are also included cases in which the symptoms are as acute as those attending perforation of ulcer of the stomach. He does not believe that these ultra-acute cases are difficult of recognition. Immediate operation is demanded in every instance in which there is reasonable suspicion that suppuration has taken place. In cases outside of those above named, the question of

operation may be kept in obedience for the first few days after the attack, and may usually be left open for decision until the fifth day or after. The great majority of cases of appendicitis recover spontaneously without either an operation or the formation of an abscess; the ultra-acute cases are actually rare, and relatively to the whole mass of examples of all degree suppuration may be said to be uncommon. There are certain cases of adults in which the attack would appear to be led up to by gross deviations from normal food-taking. For example, those individuals who have no teeth, those who "bolt" their food, those who overeat, those who constantly eat indigestible food, and those who neglect their bowels. If these errors be corrected there may be no repetition of the attack. Removal of the appendix is to be recommended in chronic appendicitis, in those cases in which there are no actual attacks, but in which there is abiding discomfort in the right iliac fossa with exacerbations of uneasiness. The removal of the appendix is not a panacea for all ills, nor even for all those manifold pains which seize upon the lower segment of the abdomen.

The Principals of Treatment of Tubercular Laryngitis.

St. Clair Thomson (*Journal of Laryngology*), in an interesting paper upon this subject, arrives at the following conclusions, based upon his own personal experience, plus the opinion of other observers:

1. Pathology and clinical experience show that in the majority of cases the focus of infection is near or in the crico-arytenoid joint.

2. Many cases only present themselves at a stage when the possibility of effecting a cure by local measures is quite untenable.

3. The principle of *primum non nocere* should be constantly kept before us, as many measures which have been tried in this affection have only distressed the patient and hastened the disease.

4. In the light of present knowledge and therapeutic resources, the most rational principle is to try and make an early diagnosis of the disease while in an incipient stage—any persistent or suspicious laryngeal catarrh should be treated seriously in even a presumptive diagnosis.

5. Once diagnosed the patient should be treated on the principles laid down in the modern method of sanatorium treatment.

6. Symptomatic treatment should be directed to an irritative, catarrhal or obstructive condition of the air passages.

7. In addition, silence should be enjoined, the disuse of the voice being proportionate to the degree in which the focus of

infiltration approaches interferes with the arytenoid joint.

8. In cases where the situation or extent of disease do not warrant an expectation of complete arrest of the process, treatment should be symptomatic, and in many such cases the sanatorium treatment is uncalled for.

Therapeutic Uses of the Organic Extracts.

O. T. Osborne (*Medical News*, July 12, 1902) says that if there are cerebral excitement, palpitation, and progressive loss of weight, thyroid treatment is contraindicated; if the patient is sleepy, apathetic, with but little palpitation, has no headache, and is putting on weight, thyroid treatment will probably benefit the case. This drug is of value in amenorrhœa or scanty menstruation, as it produces a tendency to hemorrhages. Thyroid has been used by some clinicians in carcinoma of the uterus as well as carcinoma elsewhere. Osborne has not seen any benefit from its use. The author is inclined to think that it would be wise always to try thyroid treatment in the insanity of the menopause and in puerperal insanity, as there is probably a disturbance of the thyroid at these times. The writer knows of no established therapeutic use of the pituitary substance except in acromegaly. The toxic headache of acromegaly is always relieved by pituitary tablets. The exhibition of pituitary extract is a logical treatment for dwarfs. He has good success in giving the thymus gland in cases of Graves' disease in which feeding of the thyroid gland aggravates all the symptoms. It is also beneficial in the treatment of tuberculosis. Adrenalin should be used in all cases of low vasomotor tension, typically in Addison's disease, and in the anemias. It should be used with care in persons over fifty years of age. There is much discussion at present about the ovary, but little is known of the internal secretion of this gland. Until careful chemical investigations may reveal some isolated principle, the therapeutic efficiency of mammary extract will remain unsatisfactory.

The Surgical Treatment of Obstruction in the Common Bile-duct by Concretions.

Mayo Robson (*London Lancet*) says that when once gall-stones have reached the common duct their attempted dislodgment by purely medical means is, with few exceptions, disappointing in the extreme, and the unfortunate patients are condemned to a lingering illness, usually ending in death, unless the obstruction can be removed by surgical intervention. No surgeon should attempt the removal of gall stones unless

he is prepared for any of the various operations on the biliary passages, as it is almost impossible to say beforehand what may be required until the ducts have been explored by the fingers, and no operation should, as a rule, be concluded until it is clearly made out that the ducts, including the hepatic or common ducts, are quite free from concretions. He finds from an experience of some hundreds of cases that the common bile duct has to be attacked in one out of every five or six cases. In 10 cases Robson has been able to work a stone back into the gall-bladder. The attempt to push it into duodenum is inadvisable, as it may be pushed into the diverticulum of Vater, and so be missed, and the operation rendered futile. He has not attempted to crush a concretion, nor to perform cholecyst-enterostomy during the past two years. The operation of opening the duodenum, as suggested by McBurney, the writer considers more difficult and more dangerous than choledochotomy. Of the ideal operation choledochotomy, the author says he has been able, as the result of his experience of 60 cases, to modify the operation in such a way that what was formerly a most difficult procedure, involving prolonged manipulation, special appliances, and at least two assistants, is now a comparatively simple operation, in the greater number of cases only requiring the help of one assistant, and not requiring the use of any special apparatus. The time of performing the operation is reduced to 30 or 40 minutes, where the adhesions do not give unusual trouble. Robson places a firm sandbag under the back opposite the liver, which not only pushes the spine and with it the common duct forward, so that it is several inches nearer the service, but acts like the Trendelenburg position in pelvic surgery by letting the viscera fall away from the field of operation. The author makes a vertical incision over the middle of the right rectus and separates the fibres with the finger, which he finds the most effective way of exposing the gall-bladder and bile ducts; and when necessary to open the common duct or the deeper part of the cystic duct. Robson carries the incision upward in the interval between the ensiform cartilage and the right costal margin as high as possible, thus exposing the upper surface of the liver very freely. By lifting the lower border of liver in bulk, the whole of the gall-bladder and the cystic and common ducts are brought quite close to the surface. The assistant can keep the parts well exposed by making traction on the gall-bladder with his right hand, while he

retracts the left edge of the wound and the viscera with his left hand and a sponge.

It will be found that an almost straight passage exists from the gall-bladder through the cystic and common duct to the duodenum, and if the adhesions have been properly separated the surgeon has immediately under his eye the whole length of the ducts with the head of the pancreas and duodenum. The surgeon, whose hands are both free, can now with his left finger and thumb so manipulate the common duct as to render prominent any concretions, which can he cut down on directly, the edges of the opening in the duct being caught by pressure forceps. The bile, which usually flows freely on incising the duct, must be quickly wiped up with sterilized gauze pads, and a sponge placed in the kidney pouch. After removing all obvious concretions, the fingers are passed behind the duodenum and along the course of the hepatic ducts to feel if any other gall-stones are hidden there, and a gall-stone scoop is passed quite up into the primary division of the hepatic duct in the liver, and quite down to the duodenal orifice of the common duct. The incision in the bile-duct is closed with a continuous catgut suture by means of an ordinary curved round needle. Where the pancreas is indurated and swollen from chronic pancreatitis a drainage tube is inserted directly into the tube, and stitched in with catgut; in other cases a drainage tube is stitched into fundus of the gall-bladder. A gauze drain through a split drainage tube is generally inserted, and either brought out through an incision in the loin or by the side of the gall-bladder drain. The wound is closed in layers by continuous catgut sutures. To lessen the risk of hemorrhage, 30-grain doses of chloride of calcium are administered by the mouth for a few days before the operation, and 60-grain doses thrice daily by the rectum after the operation. He has performed 21 successive choledochotomies without a death, and his mortality since June, 1900 (68 cases) is 5.5 per cent.

Instruction in Anaesthetics.

The British Medical Journal says:—For many years it has been urged by authorities on the subject of anaesthetics that no one should be allowed to qualify in medicine or surgery until he or she has shown a certain amount of proficiency in this very important branch of medical work. A paper On the Advisability of the Inclusion of the Study of Anæsthetics as a Compulsory Subject in the medical Curriculum was read before the Society of Anæsthetists in April 1901 by Dr. Dudley Buxton, in which the author gathered together many

and various considerations which gave weight to his conclusions. The Council of the Society subsequently addressed itself to the General Medical Council, and urged "that the teaching of the administration of anæsthetics should be included in the schedule of compulsory subjects." The Education Committee of the Council, to whom the subject was referred, thereupon report that they fully appreciated the importance of the proper teaching in the subject of anæsthetics, but were of opinion that it was not expedient that it should be compulsorily included as a separate subject of the medical curriculum. The Council itself in December last approved that report. Since that date, however, the matter has been considered by the Conjoint Board of the two London Colleges of Physicians and Surgeons, who have now adopted the following regulation: "That every candidate who passes the second examination of the Board, or an examination at a University recognised in lieu of it, on or after the 1st of May next, will be required to produce, before entering for the final examination, a certificate of having received, at a recognised medical school and hospital, instruction in the administration of anæsthetics to the satisfaction of his teachers." It is certainly satisfactory to find that the large number of students who, in the future, pass into the profession through the Conjoint Board must possess at least the minimum of experience in the administration of anæsthetics which is necessitated by the above resolution.

The Diet in Advanced Life.

The Medical Press says that theoretical considerations suggest, and practical experience confirms, the view that each decade of life has its special dietetic conditions. The infant organism cannot maintain itself in health on a diet which responds to the requirements of the adult, and it is equally certain that, with the advance of years modifications of the adult dietary are necessary if certain morbid contingencies are to be avoided. The elderly man automatically reduces his output of energy, and his tissues no longer utilise more than a limited amount of nutriment; consequently, if he maintains his dietary at the adult standard, there must result a disturbance of that physiological equilibrium which constitutes health at all ages. This principle, of course, does not preclude the liberal nourishment of the aged under special circumstances, but it entails the recognition of the axiom that the aged require less food than persons in the active period of life. Moreover, the diet of those advanced

in years often requires to be considered not so much from the point of view of the amount that would be theoretically good for them, but of the possibility of their assimilating it. The wear and tear of life may have reduced the functional activity of their viscera so that they have become unequal to the digestion and assimilation even of the amount of food which normally they ought to take, and the measure of a healthy diet will have to be based on the functional activity of their organs; in other words, the limitation of food, though always necessary in the aged, will vary according to individual conditions.

The Treatment of Prostatic Hypertrophy Associated with Stone in the Bladder by Means of Litholapaxy and Bottini's Operation at one Sitting.

Meyer (Annals of Surgery, July, 1902) regards the treatment of hypertrophied prostate alone, two standard methods are employed at the present time, viz., prostatectomy—by the suprapubic or perineal route, or both combined—and galvanocautic prostatotomy, the so-called Bottini operation.

Do these remain equally useful if vesical calculus complicates the prostatic trouble?

Prostatectomy certainly holds its own in the presence of this complication, the suprapubic method being the operation of choice. The entire operation is complicated with but one vesical incision.

The perineal route may be selected or a combination of the perineal and suprapubic operations may be done. My experience has taught me that the Bottini operation is the most satisfactory way of dealing with these prostates. In this event litholapaxy has to be employed to crush the stone. The only point left to be decided then is: Shall litholapaxy be done at the first sitting, and Bottini's operation at a later one, or shall both be combined?

Keys, four years ago advocated suprapubic cystotomy for the removal of the stone where trouble from the prostatic urethra was to be expected, and litholapaxy only in selected cases. Suprapubic total prostatectomy was considered too dangerous a procedure.

Chismore employs a modified litholapaxy, crushing the stone at different sittings under local cocaine anæsthesia; and—at least up to 1897—directed his attention in these cases to the stone alone.

The object of this paper is to show that to the operation of litholapaxy may be added without evil consequences the instrumental intervention of Bottini's operation at the same sitting. Nine cases are men-

tioned in one group in which the symptoms of prostatic enlargement were less than those created by the stone or stones. The stones were removed, suprapubically. Four recovered as far as the suprapubic incision was concerned. Two were permanently drained above the pubes, one a sufferer from chronic bronchitis, died eight days afterwards. Two who developed persistent suprapubic fistulae, were permanently cured by Bottini's operation.

In a second group of four cases litholapaxy was done under general anesthesia. One case derived great and permanent benefit. In two suprapubic cystotomy had to be added, resulting in a cure of symptoms in one and a cure after a Bottini operation was done primarily, and it worked like a charm.

The last group consists of three patients, aged 55, 60 and 74 years respectively. Full and complete histories of each of these cases are given. Eventually litholapaxy plus the Bottini operation, was done in each case, with perfectly satisfactory results in all of them.

Chismore, who has done 61 such operations, says that "it is entirely feasible to anyone who has the gift of patience, a gentle hand, some mechanical tact and the proper professional training."

The Analogies Between Plimmer's Bodies and Certain Structures Found Normally in the Cytoplasm.

Le Count (*The Journal of Medical Research*, May, 1902) believes that there are analogies between Plimmer's bodies in cancer cells and certain structures in the cytoplasm of normal cells. The author has made use of sublimate solutions for fixation purposes in studying cancer cells met within axillary nodes removed in connection with mammary carcinoma. The writer found typical Plimmer's bodies in these lymph glands, possessing single or double and distinct capsules with a more faintly staining zone between the capsule and the so-called nucleus. With Borrel's method the encapsulating zone stained more readily than with the hematoxylin and iron method. Two or more of the so-called parasites were often seen in a single cell. He says that he has never seen a Plimmer's body in such a position that it could be safely stated that it was extra-cellular. Carcinoma cells are large cells and in serial sections; a single dividing nucleus often appears in two or more sections; therefore, apparently extra-cellular parasites might belong to cells, a large part of which were to be found in other sections; nor were Plimmer's bodies seen in other than epithelial cells. There are strong analogies

between Plimmer's bodies and the archoplasmic elements of normal cells, not only in their discovery by similar technical methods, but also in their position. Besides, the sporulation or multiplication of the cancer parasite, by budding, is comparable to the division of the centrosome by simple cleavage. The archoplasmic structures described by Heidenhain in the giant cells of a mesenteric lymph gland of a young rabbit that died with a diarrhea contained many central bodies that are very comparable to forms described as Plimmer's bodies. The rayed periphery sometimes observed in Plimmer's bodies reminds one forcibly that the astral fibers of the archoplasm converge at the margins of the centrosome.

In conclusion he says that enthusiastic advocates of the parasitic theory of cancer who use Plimmer's bodies in support of their views should be required to exclude or account for the centrosome and the enveloping variously named formations of the archoplasm in carcinoma cells.

Intra-Tracheal Medication in Diseases of the Respiratory Tract.

Joshua L. Barton, in *The Journal of Tuberculosis*, says that his experience with his method of medication leads him to heartily endorse it. In simple acute tracheo-laryngitis, tracheo-bronchitis, bronchitis, and asthma, when secondary to bronchial disease, a rapid cure may be confidently predicted. He discusses in succession the commonly offered objections:

1. Interference with respiration.
2. Excitation of severe cough.
3. Can be used only by the laryngologist.
4. Has no therapeutic value.

Considering the length, diameter and ramifications of the trachea, aggregating a respiratory surface in these tubes of about 130 square meters, that this large surface is covered with epithelium capable of absorbing liquid and gases, and further more that the amount of liquid introduced is only about half an ounce, in drachm doses, it is evident that there can be no complete or serious stoppage of air, and its equivalent, oxygen.

The fear of cough may be dismissed in the knowledge that the remedies are dissolved in a bland, unirritating oily fluid as olive oil, glycerine, or petroleum. These do not irritate that portion of the larynx supplied by the superior laryngeal nerve in the small quantity that comes in contact with the larynx, while the lower respiratory tract is made tolerant.

Special training for administration is unnecessary. An ordinary aspiratory syringe, to which has been fitted a curved endo-laryngeal tube seven inches in length,

is all the apparatus required. The patient is required to avoid swallowing; keep the tongue well drawn out, and to take a deep inspiration simultaneously with the quick injection of the fluid. Its therapeutic value is in proportion to its power to fulfill one or more of the following indications:

To remove the cause of the disease; to modify its course; restore normal physiologic action; disinfect the diseased tract; add to the comfort of the patient. Acting under these indications the author does not contend that intra-tracheal medication is a "sure cure" for tuberculosis, but rather a powerful adjunct to other treatment.

Chronic Hypertrophy of the Fauical and Pharyngeal Lymphoid or Adenoid Tissues.

Marsh (London Lancet, June 21, 1902) refers to the histology of the tonsil, pointing out that this structure is composed of a network of loose connective tissue in the meshes of which are held the lymphoid follicles, and, according to Sajous, conglomerate glands. The tonsils are covered with cylindrical epithelium and the common term used to express hypertrophy of the faucial tonsils or hypertrophy of Luschka's tonsil, have been spoken of as "adenoid vegetations in the nasopharynx," "adenoid growths," postnasal growths," "postnasal adenoids" and now as "adenoids," while hypertrophy of the scattered patches and bands in the pharynx is termed "chronic or faucial or granular pharyngitis." Marsh states that considerable diversity of opinion exists as to the influence of the most of the assigned causes, namely, heredity, scrofula, lymphatic temperament, climate, anterior nasal stenosis, cleft palate, vaginal secretions at birth, the acute exanthemata, whooping cough and nasal and nasopharyngeal catarrh. The writer thinks that heridity, bad climate, bad food, bad hygiene and neglected cold account for the majority of cases. Three varieties of enlarged tonsils are described: 1. When the hypertrophy is chiefly in the horizontal diameter—the projecting tonsil. 2. When the hypertrophy is chiefly in the vertical diameter—the elongated tonsil; and 3. When the hypertrophy is chiefly in the anteroposterior diameter—the broad sessile or flat tonsil. The author discusses the symptoms caused by enlarged tonsils under 3 headings: 1. Obstructive symptoms. 2. Catarrhal symptoms; and 3. Reflex symptoms. He considers operative treatment necessary when they are the cause of frequent or prolonged catarrhal attacks or acute inflammatory attacks, when they are responsible for lymphoid adenitis, when the crypts or recesses

are occluded with exudate, which does not yield to other treatment, and when they are the probable source of reflex coughs. An anesthetic is usually necessary in children, who are not nervous or sensitive, the operation may be performed with local anesthesia. Dr. Marsh describes at some length the various operative procedures and the postoperative treatment—the essentials of the latter are: 1. Avoidance of exertion. 2. An equitable temperature during the healing process. 3. Suitable diet. 4. A cleansing wash. The reports of a number of cases are included in this article.

Peripheral Venous Thrombosis in Pneumonia, with Report of Three Cases and a Review of those Previously Recorded.

Steiner, in the Johns Hopkins Hospital Bulletin, June, 1902, reports five hundred pneumonias observed at the Johns Hopkins Hospital and that but three cases of peripheral venous thrombosis were met with. In the first case there was pneumonia of both lungs, crisis on the ninth day, accompanying pleurisy of both sides; second attack of pneumonia seven days after the crisis of five days' duration. Thrombosis right popliteal vein occurred twenty-eight days after the crisis and six days after the termination of the second pneumonia attack; gradual recovery. In the second case thrombosis of the right internal saphenous vein occurred in the sixth day of the disease, and the patient died on the twelfth day. In the third case there was a thrombosis of the right popliteal vein six days after the patient's temperature became normal.

It is rather surprising that thrombosis is so rare in pneumonia, since, in this affection, the blood is rich in the elements necessary for clotting. Only thirty-eight other cases could be collected from the literature. The thrombosis occurred during convalescence in twenty-seven of these; in one it occurred on the day of the crisis, and in four during the course of the disease. It must be considered as a sequelæ, not as a complication of the disease. The lower extremities were always involved. As in typhoid fever, and other infectious diseases, the thrombi are found most often on the left femoral vein. The left extremity was alone concerned in sixteen cases, the right in ten, and both in seven. The more frequent involvement of the left is due to the more difficult return flow of the blood on this side in consequence of the greater length and obliquity of the left common iliac vein and its passage beneath the right common iliac artery.

The Influence of School Life on Health.

Wright (Boston Med. and Surg. Journal) says:

School sessions should not extend over more than three hours, including a short recess, so that the scholars' meals shall not come too far apart. Too long an interval between the morning and noon meals makes necessary a luncheon, which is eaten cold and consists, perhaps, only of sweets or nuts. Exercise should not be taken during the forenoon intermission, as the scholar often becomes overheated and has to cool off in his wet clothing. It is better to have recreation come outside of school hours entirely. The author believes that the evils just mentioned often lead up to chronic digestive disturbances and even phthisis.

Every case of tonsilitis should be regarded as contagious, not only *per se*, but because it often masks diphtheria.

Some teachers do not yet understand that measles and whooping-cough are dangerous diseases and are responsible for many deaths.

The author has made valuable contributions toward the warfare against contagion in his own city, New Haven. It possesses a sanitary drinking-fountain, at which any number of people may drink in succession without exposing themselves to opportunities for catching disease.

Mammary Cancer.

Bryant (British Medical Journal, May 17, 1902) finds that the interval which may take place between the primary amputation of the breast for cancer and its recurrence in the scar or the second breast when such occurs is most uncertain. While in one-half the cases tabulated recurrence took place in five years or less, in the other half the intervals was from six to thirty-two years, and at least in two-thirds of the cases occurred after ten years. Even when two or three operations were undertaken, the prospects of life were not bad. In fourteen cases there was recurrences about the scar of the original operation, in the scar of the axilla in one; in the sternum in three cases and in the second breast in ten cases and in five of these the scar of the first operation was likewise involved. Bryant suggests that the surgeons who advocate the clearing out from the axilla of all lymphoid tissues in every case should consider this fact. In only one of the cases he describes was the axilla cleaned out; this is not his custom and these results would not suggest a change of the operation. Dr. Bryant thinks that the results of operation would be much better than they are now if they could always be undertaken during the early

periods of the disease, as shown by the majority of his cases; that every breast tumor, neither clearly inflammatory nor encapsulated, which seems to involve the gland tissue and may therefore be cancerous, should be at once explored and removed, if found to be cancerous, with the whole gland and then cancerous growths when localized should be similarly treated. In advanced and neglected cases, the more thorough operation of Banks, Gould and others may be used, and in cases of recurrence not favorable for operation, unless the removable of the ovaries should be found to be successful in the future, the X-ray should be employed.

Milk Idiosyncrasies in Children.

Dr. Louis Fischer, of New York, at the recent meeting of the American Medical Association reported a case as follows:

The mother of an infant had no milk and a wet-nurse was secured, but only kept three months as the child had gained but little weight and did not thrive. After three months of age, the child had been weaned by the father, a physician, and condensed milk was given. The child vomited frequently and was always constipated, requiring an enema every day. The stools contained shreds of mucus and were very foul smelling. Various artificial foods were tried, fifteen or more, and the infant did quite well until milk in some form was added. For several weeks the child had lost weight at the rate of two ounces per week. Upon examination it was found that the infant was rachitic; the extremities were cold, and the circulation poor and feeble. A soft hemic murmur was heard at the base of the neck. The nurse stated that sometimes after feeding the child had convulsions, which persisted until the colon was flushed. Spoon feeding was finally resorted to, and milk was given in various ways; sterilized, pasteurized, raw and peptonized. When first seen by the writer, water and whey was being used. Upon this it improved, but as soon as milk was added it became worse. Malt soup was then given and from that time the infant began to thrive and all symptoms disappeared.

Purulent Ophthalmia of the New-Born.

Lander, (Cleveland Medical Journal) estimates that at least 25 per cent. of the blindness that exists in the civilized world to-day is the result of purulent ophthalmia. This blindness, beginning as it does with life itself, so handicaps the individual affected that instead of becoming a producer, he remains more or less a consumer only, and to that extent a charge upon society.

The financial loss to the United States alone, caused by this disease, is not less

than \$7,500,000 ($7\frac{1}{2}$ millions) annually. Most of the European governments, and of the States, require by law that all cases of purulent ophthalmia shall be reported to the authorities, in this way classing it with diphtheria, scarlet fever, etc. It is generally admitted that infection takes place during delivery.

Knowing the source and cause of purulent ophthalmia in the new-born, our treatment is naturally divided into prophylactic and curative. Prophylactic measures are essentially those which belong to the obstetrician and may be considered under two divisions: those adopted before the child is born, and those adopted after the child is born. The first necessarily must be an attempt to free the vagina of all pathogenic germs by thorough washing out with an antiseptic fluid regularly, some days before expected confinement. It is not difficult to understand how next to impossible it is to render a septic vagina completely aseptic. However carefully the irrigation is done, there are likely to remain some germs hidden away among the folds of the mucous membrane. The second division has to do with the destruction of the germs that may have entered the conjunctival sac during the passage of the head through the vagina. For this purpose different germicides have been used. The best results were obtained from the two per cent. silver nitrate and one per cent. bichlorid solutions. The disadvantage of the bichlorid solution is the greater irritation it causes. The procedure is very simple. As soon as the child is born the face is wiped clean, the eyelids are separated with the fingers, and a drop of a two per cent. silver nitrate solution is allowed to fall on the eyeball. While this is the original Crede method, we believe it to be a safe precaution to follow the application of silver nitrate solution with an application of sodium chlorid solution to neutralize any excess of the former.

Curative treatment must be carried out with much energy regardless of the tender age of the patient. One of the first necessities is to keep the conjunctival sac free from pus. This is best accomplished by the frequent use of warm three per cent. solution of boric acid. Ice cold applications must be used three times daily, from one to three hours at a time. They may be pledgets of lint taken off the ice. (Caution must be used in these applications. So long as the lids are much swollen they may be pushed, but if there is little swelling of the lids the cold may seriously affect the cornea.) Among the many germicides used to destroy the micro-organism, the most popular still is a solution of silver nitrate,

one per cent. He does not recommend protargol.

Latent Pneumonia.

Dr. Harvey Littlejohn (Edinburgh Medical Journal) points out that it is the characteristic of many diseases to have an insidious onset, and to have made considerable progress before the person affected is aware of their existence and the physician able to make a diagnosis. This is specially so in some chronic diseases, as atheroma of the aorta and valves of the heart, fatty and fibroid degeneration of the heart, parenchymatous degeneration of the liver and kidneys and cancer. But it is also so in some acute affections such as measles, scarlet fever, diphtheria and typhoid fever, while in pneumonia, pericarditis, peritonitis and inflammation of other serous surfaces, not only may the symptoms of disease be marked or absent, but the person affected may continue to go about in a state of apparent good health. It is difficult, says the writer, to explain and bring into accordance with generally accepted views how such affections as tumors and abscess of the brain, large aneurisms in the thoracic cavity, or such acute processes as those just mentioned, involving large portions of one, or even both lungs, can run a latent course, betraying no sign of their existence until sudden collapse and death occurs. The subject, however, is of special interest to the student of forensic medicine. In forming an opinion as to the cause of death in cases of this description, no difficulty would, as a rule, be experienced. The absence of injuries sufficient to account for death, the circumstances in which the person died or was found dead, together with the discovery of pathological conditions in the body, known to be frequently associated with fatal syncope, would entitle a conclusion that death was due to natural causes. The difficulties of the medico-legal examiner were greatly increased, however, should an injured person die and be found to have suffered from an acute inflammatory process. Under these circumstances the additional question would have to be determined, namely, whether the diseased condition did not directly arise from alleged violence, and the fact that a person might be going about apparently in his usual state of health, and yet be suffering from an acute disease, which usually rendered the sufferer incapable of exertion should here be kept in view, while a point of great importance would be the position and nature of the injuries in relation to the site of the inflammatory condition. Of all acute inflammatory diseases, which might run a latent course during the

whole period of their existence, the author has found pneumonia the most common. The author gives a table of thirty-three cases of true latent pneumonia collected from his own notes. They have the following characteristics in common: 1. The disease was unsuspected during life, the sufferers having exhibited no sign of bodily weakness sufficient to attract the attention of those living in close relationship with them. 2. Death occurred suddenly, or followed with an hour or two after the appearance of serious illness, and before medical assistance was requisitioned. 3. The disease was well advanced, the lung in the majority being in a state of grey hepatization. In some, strict inquiry from friends disclosed that the deceased person had complained of a feeling of illness, sometimes of shortness of breath, pain in the side, cough, etc., but such complaints were indefinite in character and usually not referred to again. One fact of great significance stood out in relief in considering the previous history and social condition of the person affected, and that was the predominance of excessive alcoholic intemperance. When it was possible, this subject was carefully inquired into, with the result that in seven cases no facts could be obtained owing to the person being a new comer or unknown: in one case the diseased was strictly temperate; in the remaining twenty-five the were constantly intemperate. Of the latter, six drank alcohol in excess whenever their circumstances permitted it, while the remaining nineteen had been constantly intoxicated and living in a state of debauch for several days prior to death. In view of these facts, it was difficult, in his opinion, to dissociate the influence of alcoholism, both from the causation of the disease, and from being a prominent factor in the latent course which it pursued. Drunkenness led not only to dangerous exposure to atmospheric conditions, but also tended to produce a peripheral vasomotor paralysis and dilation of the capillaries of the skin, and thus greater radiation of the heat from the body: in addition, the oxygen-carrying power of the red-blood corpuscles was reduced, so that the general nutrition of the tissues was lowered. The greater potency of chill and the diminished vitality of the tissues under such conditions, and the deadening of sensibility and the temporary stimulating effect, all produced by alcohol, would all help to explain the position. In conclusion, the writer of this most practical article puts forward the following propositions:

1. Pneumonia may be completely latent during its whole course.

2. The form of the disease most liable to be latent is basal lobar pneumonia.

3. Alcoholic apical pneumonia is rarely latent during its whole course.

4. The disease may be latent, even although the whole of one lung, or a considerable portion of both lungs, is affected.

5. In latent pneumonia sudden death most commonly occurs in the stage of grey hepatization.

6. The condition is practically confined to persons addicted to excessive alcoholic intemperance.

7. Complete consolidation of the whole of one lung is not inconsistent with a person having continued to lead an active life up till the time of death.

8. Latent pneumonia is most frequent as a cause of sudden death during the winter months.

9. It is most common after the age of 40 and in the male sex.

10. The explanation of "latency" is to be found in the quantity of alcohol consumed after the onset of the disease—first in masking the ordinary signs and symptoms by dulling sensibility; and second by its stimulating effect, thus enabling the person to go about until he suddenly collapses and dies.

11. In medico-legal cases the discovery of latent pneumonia may satisfactorily explain the death of an individual, and thus allay all suspicion connected with the case.

12. On the other hand, the existence of pneumonia, even in an advanced stage, will not preclude the possibility of an individual having died from other causes, natural or violent, and of his having been, at the time of receiving an injury, in a stage of apparent good health.

Mental Symptoms and Bodily Disease.

Raw, notes (The London Lancet, June 14, 1902) that form of mental disorder associated with visceral disorder, and the pain and tenderness due to changes in some parts of the central sympathetic system caused by disorders affecting the organs to which the sensory or sympathetic nerves are supplied and called by Head reflected visceral pain. There are often hallucinations of sight, hearing, smell and varying moods of exaltation, depression or suspicion, but no fixed delusions and the symptoms are usually temporary. In phthisis the symptoms are often pronounced, but he doubts the general occurrence of *spes phthisica*. This only occurs, as a rule, in patients who do not appreciate their condition. In his experience the opposite mental state is often present, especially in the later stages, and delusions of suspicion and fear are present. In cardiac diseases,

with reflected pain over the chest with superficial tenderness, there may be hallucinations and sometimes wild delirium or exaltation of feelings and mania. Raw quotes Head's conclusions: "When reflected pain of visceral origin comes into existence, the sensations produced by abnormal activity of the viscera crowd into consciousness and usurp the central field of attention. The patient's character appears to be altered. He will become moody, at one time unduly exalted, at another depressed without cause. Reason is displaced and he will have lost control over the expression of his emotions and of his temper." Head concludes his paper with the words: "When the mental states mentioned above appear in consciousness they seem an intrusion from without, an inexplicable obsession that can neither be controlled nor subjected to logical analysis. All such states have since the earliest times been classified as hysteria, and I shall be satisfied if I have been successful in relegating to their proper position a small band of symptoms included under that vast heterogeneous group." The mental symptoms of valvular heart disease are also mentioned and are generally observed in the authors experience toward the close of the disease. They are variable and frequently the patient is irritable and suspicious, and acute mania may develop. In kidney disease there is no special form excepting in the later stages of chronic Bright's disease when uremic symptoms appear. In gout the extremes of mental action are met with from maniacal excitation to the most profound melancholia. In exophthalmic goiter some nervous and mental symptoms are noticed, delusions of impending danger, suspicion, alteration of the normal nature, irritability, etc. Other disorders mentioned are myxedema, diabetes, chorea, which he thinks is often due to fright and sudden mental shock, and in which the mental symptoms when they occur are nervous excitability and fear. Raw mentions next the acute infective fevers, typhoid and rheumatic fever. In the former we have frequently during the acute stage delirium due to general toxemia or a condition of wakefulness with hallucinations and delusion. In the post-typhoid insanity, however, we have the exhaustion type. In pneumonia we may have a violent delirium, but it rarely follows the disease. The mental symptoms in rheumatic fever are rare and usually due to hyperpyrexia. In conclusion he mentions the relation of the sexual organs to the mind, and the need of a special reception hospital for those suffering from mental disease and temporary insanity.

A Contribution to the Subject of Infant Feeding.

Dessau (Medical News, May 31, 1902) reviews the modern methods of infant feedings, and calls attention to the fact that in attempting to obtain a substitute for human milk, we should seek to benefit the masses and not the classes alone.

Therefore the method of modification advised should be within the reach of the purse and the intellect of the masses of the community. He says that the physiological process of digestion and assimilation can never be reduced to the exactness of a mathematical calculation.

He states that the best of all foods for human infant, during the first year of life, is human milk.

And he believes that the profession should make every effort to have mothers nurse their offspring, or provide a wet nurse when one can reasonably be afforded.

If a substitute must be used, he prefers cow's milk, diluted with water, according to age and digestive capacity of the infant. Sometimes, not always, he uses "top milk." A pinch of salt and a heaping teaspoonful of raw cane sugar to the quart are added. The mixture is placed in a double cooker, with cold water in the outer vessel, and allowed to remain on the fire for ten minutes after the water has begun to boil (virtual Pasteurization). Ordinarily for infants under three months of age, he uses equal parts of water and milk; dilutents, if they have been previously dextrinized.

The use of the gruels as dilutents is particularly indicated for short periods after attacks of intestinal disturbance.

He claims excellent results for the method, and insists that it is just as scientific as the theory "that a facsimile of human milk may be obtained by any arrangement of the various elements of cow's milk based on the percentage of fat or cream, which is the only element possible to estimate accurately in a ready manner outside of a chemist's laboratory, the remaining estimates being made by a mathematical calculation."

An Interesting Case.

Chipault and Lefur, in the London Medical Press, reports an interesting case of a man who, without any appreciable affection of either the nervous system or of his viscera, suffered atrocious abdominal pains for years. During these paroxysms of pain, which were most intense at the naval, the body was strongly flexed, and the abdominal muscles contracted violently. The hyperalgesic region corresponded to the area of the eighth, ninth and tenth dorsal ribs. Hypodermic injections having given no good results, spinal injection were tried,

and they also failed. It was now decided to cut the intercostal nerves of the area of greatest pain, and this was done without any benefit. The posterior laminae of the eighth ninth and tenth dorsal vertebrae were then incised, and the posterior roots of the corresponding spinal nerves cut. When the spinal cord was exposed there was found a localized patch of arachnitis of some standing. The result was eminently satisfactory. At the end of a month the hyperalgesic zone had disappeared, and gradually the severity of the paroxysms of pain diminished until they finally ceased. The operation and the pathological condition both have an interest.

Ergotine as a Prophylactic and Specific in Childbed Fever.

Solt, in the London Medical Press, says that he always uses ergotine in his practice in preference to crude ergot, as the latter is so uncertain. The chief property of ergotine is that of exciting contractions of the uterus. Under the influence of the ergotine the flabby, softened, diseased uterus contracts. Its walls become thicker, firmer and drier. The lymph spaces become smaller. The relaxed blood-vessels also contract. The edematous soaking of the tissues that precedes the entrance of disease germs can no longer take place. Protection is therefore afforded against the entrance and development of such germs.

By small doses of ergotine powerful spasmodic contractions of the uterus are never set up, but normal contractions. They begin in the extreme periphery of the uterus, even in the adnexa, and pass to the cavity of the uterus. The contraction hastens the exudation of the lochia and also of necrosed tissues. After the contraction the uterus does not dilate again so much as before. It cannot take up so much fluid as before, since the superfluous moisture has been expelled by the contraction. Given prophylactically ergotine protects the uterus against infection from without, and from wounds of the vagina, perineum, and rectum. Naturally the temperature falls also when absorption is prevented. The author also gives ergotine in all cases associated with inflammation and suppuration. In infected suppurating wounds, abscesses, abscesses with pyemic or septicemic symptoms, he gives ergotine in place of alcohol. The patients feel better after two or three days, and the appetite returns.

Ergotine has tonic and strengthening properties. The organism disposes of the poisonous materials more readily under its influence, and later on the fewer disease germs are more easily disposed of by the phagocytes.

He would therefore give ergotine before all operations, and in all cases of fever with exhaustion. During the past seven years he has treated about thirty cases of puerperal fever with ergotine, giving it all through the illness. All the cases recovered with a rapidity he had never before observed. In all cases when the labor has been normal the writer gives ergot two or three times a day in powder. After each operation, or when the patient is suspected of intoxication, Salt orders the following as a prophylactic:

R Ergotini,	50 parts.
Aquæ destilatae,	50 parts.
Tinct. amaræ,	15 parts.

M. D. S. Ten to twenty drops three times a day.

R Ergotini,	50 parts.
Aq. menth. pip.	20 parts.

M.

Causes and Treatment of Diabetes Mellitus.

Croftan (American Journal of the Medical Sciences) says that blood and lymph drawn from the body under antiseptic precautions will gradually destroy their own sugar, the latter destroying a greater quantity in a given time than the former; and by examining the several constituents of the blood seriatim he concludes that this sugar destroying agent is not contained in the red corpuscles or serum, but in the white corpuscles or platelets, and that being soluble in physiological salt solution it is independent of the life of the cell and is a chemical process due to the action of a ferment." It was found that scarcely any decrease in the sugar of the blood experimented upon occurred during the first half-hour after removal from the body, but that during the next hour the sugar destruction progressed rapidly, after which time it declined, and stained blood specimens made concurrently showed that the glycolytic action began when degenerative changes in the leucocytes commenced, and the action increased *pari passu* with increasing degeneration, thus proving that degeneration of the white cells or platelets must occur before the ferment manifests itself. During the first half-hour it was found that the sugar in the blood actually increased instead of diminishing, and this fact must be remembered when interpreting the small glycolytic power of the blood during the first half-hour after removal from the body, as during this period fresh sugar is being formed from glycogen, and the white corpuscles are slowly beginning to degenerate, thus liberating the ferment.

Experiments to determine the role of the pancreas proved that removal of the organ

decreased the glycolytic action of the blood and, therefore, it is inferred that the ferment has its origin in the pancreas, a supposition that receives further support from the discovery that trypsin in the presence of hemoglobin possesses glycolytic powers and the ferment liberated by the disintegration of leucocytes possesses so exactly the same properties as trypsin as to be, in the present state of knowledge, indistinguishable. Since reduction of this glycolytic action will lead to hyperglycemia and glycosuria, the indication in treatment is to increase glycolysis by supplying the ferment. Either the infusion of chyle or blood or the injection of leucocyte extracts, trypsin, or of vegetable glycolytic ferments, should effect this result, and experiments upon animals, from whom the pancreas has been removed resulted in an increase of sugar in the urine when lymph from a healthy animal was infused, and a similar result was noted with transfusion of blood. Vegetable ferment injection has not yet been attempted, and the danger attending injections of trypsin or leucocyte extract, owing to the correct dosage not yet being known, render them at present inapplicable to human subjects, but the infusion of lymph and transfusion of blood should be of value in treatment.

Temporary Closure of the Carotid Arteries.

Crile (Annals of Surgery, April, 1902,) mentions the great danger of hemorrhage in operations on the head and neck and to the enormous amount of time consumed in controlling the bleeding. The danger is not only immediate, but there is always, in certain cases, the fear that inspired blood will cause a late pneumonia. In order to obviate these dangers, he practises temporary closure of the carotid arteries.

As the result of experiments on dogs, he found that a properly adjusted clamp could be left in position, closing the artery from 24 to 48 hours, without serious injury to the arterial walls. Clotting was not observed, the circulation was re-established and no emboli or thrombi were formed in the brain post mortem. The clamp employed is so constructed that the blades are adjusted by means of the set screw. One blade is longer than the other and has a turned up end in order to prevent the escape of the artery. The blades are parallel to each other when approximated and are covered with pieces of rubber tubing. Twenty minutes previous to operations, in which the pneumogastric or its superior laryngeal branch is likely to be involved, 1-100 grain of atropine is administered hypodermically in order to prevent inhibitory

action of the heart. The carotid artery is closed with the clamp, using only sufficient pressure to approximate but not compress the walls of the artery. The control of the arterial hemorrhage is absolute except in such vessels as receive collateral supply from the vertebrales.

He has resorted to this procedure in 18 patients during various operations on the head and neck. Both common carotids were closed in 10, one common carotid in 5 and one external carotid in 3 cases. In all there were 28 closures of individual vessels. The ages of the patients ranged from 7 months to 69 years. There were no deaths attributable to the temporary closure of the arteries. In every instance the circulation was immediately resumed and there were no late effects on the walls of the artery, upon the circulation in the branches or on the cerebrum. Less anesthetic was necessary with closed arteries, especially when the common carotids were occluded. In the latter case there may be embarrassed respiration. Wholly or partially releasing one or both carotids gave immediate assistance to respiration.

An Explanation of the Cause of Inequality of Pupils in Cases of Thoracic Aneurism.

Wall and Walker (The London Medical Lancet, July 12, 1902,) makes the following statements:

A.—The explanation which ascribes the anisocoria at times occurring in cases of thoracic aneurysm to interference with the sympathetic is unsatisfactory. 1. On anatomical grounds: (a) because in the majority of cases there is no evidence of implication of that portion of the sympathetic nerve trunk containing pupil dilator fibers; and (b) because it is not established that sympathetic filaments supply the sac wall of an aneurism. 2. On physiological ground: (a) because the explanation supposes that the same conditions may produce sometimes irritation and sometimes paralysis of the nerve; (b) because cases are rare in which there is any evidence apart from the pupillary change that the sympathetic is involved, and (c) because the pupillary changes are not those met with in cases where the sympathetic is involved.

B.—1. Alterations in vascular conditions may be associated with alterations in the size of the pupils. (a) High arterial tension is associated with small pupils, and (b) low arterial tension is associated with large pupils. 2. The physical explanation of this phenomenon is probably to be found in the spiral structure of the vessels of the iris.

C.—Local inequalities of blood pressure may therefore be associated with inequali-

ties of the pupils. (a) Clinical evidence: 1. Enlargement of pupils is frequently associated with diminution of the temporal and radial pulses on the same side of the body. 2. Obstruction of the carotid artery on one side of the neck is associated with enlargement of the pupil upon the same side. (b) Experimental evidence: 1. Obstruction of the carotid in rabbits is associated with enlargement of the pupils on both sides, owing to the freedom of circulation at the base of the brain. 2. Injection of water into a carotid artery of a dead rabbit causes narrowing of the pupil upon the same side. 3. Digital compression of the carotid artery in the human subject is associated with enlargement of the pupil upon the same side.

Treatment of Chronic Suppuration in the Frontal Sinus.

H. Lambert Lack (Edinburgh Medical Journal) sums up the treatment for this condition as follows:

1. In all cases of suspected suppuration in the frontal sinus intranasal treatment should be tried in the first instance. This consists in securing free access to the lower end of the infundibulum by removing the anterior end of the middle turbinate, part of the uncinate process, and opening up the anterior ethmoidal cells, at the same time removing any polypi or other obstruction that may be present, followed by simple nasal irrigation for a few weeks. In favorable circumstances this may be followed by cautious attempts to wash out the sinus through its natural opening, but on no account should an attempt be made to forcibly enter it from the nose.

2. If this method fails and serious symptoms are present, the frontal sinus should be opened externally, and should be obliterated when it is not very large; when the posterior wall is carious or perforated; when cerebral symptoms are present; and even when the sinus is large if the patient does not object to the risk of deformity.

3. In all other cases a free opening should be made into the nose, and free drainage maintained until all suppuration has ceased. Operations providing external drainage only are insufficient, and operations allowing of intranasal drainage for limited time only are both insufficient and dangerous.

Puerperal Eclampsia.

Harrison (Amer. Journal of Obstet. and Dis. of Women and Children, June, 1902,) believes in the toxic origin of eclampsia. The toxicity of the blood-serum forms, according to Chambrelent, an important criterion for an opinion as to the gravity of a

case of eclampsia. It is more decisive for the prognosis than the degree of albuminuria and the number of the convulsive attacks. The toxic qualities of the fetal blood though not constantly, are frequently considerably increased. The urine of the pregnant woman is less poisonous than the urine-pregnated subject; the blood-serum, on the contrary, more poisonous. The serum of the eclamptic is more poisonous than that of the normal parturient woman; the toxic condition increases with the stage of convulsion. The urine of the eclamptic is always, at the time of the increased toxic condition of the blood-serum, less poisonous than normal urine.

Ludwig and Savor assume that carbamic acid accumulates during pregnancy in consequence of the disturbance of the metabolism and causes the toxic condition of the organism. Massen thinks that the toxic substances are leucomaines. A number of observers have endeavored to demonstrate the bacterial origin of eclampsia, but so far without success.

Veit and Olshausen hold that the eclamptic attack is determined by brain anemia. With reference to treatment too much emphasis can not be laid upon prophylaxis. If the prodromic symptoms are plain, and especially if the phenomena indicate a disturbance of renal function, the hot pack should be used and the patient put on a milk diet; at the same time one should not neglect to see that the bowels are performing their proper function. When eclampsia has broken out the indications are, first, to lower the excitability of the brain by narcotics; secondly, to cut off the effects of the centripetal irritants starting from the sexual organs by as speedy an ending of the labor as possible, consistent with safety to the mother organism; third, to counteract the effect of the toxemia by restoring the function of the kidneys as quickly as possible and by producing elimination through other channels.

X-rays in Medical Diagnosis.

Haughton, in the Dublin Jour. Medical Sciences, 1902, after examining over 1900 medical cases, says: In pulmonary tuberculosis two constant signs are opacity, depending on the extent and density of the consolidation, and restricted movement of the diaphragm on the affected side depending on the loss of elasticity of the lung tissue. When delicate differences in shadow have to be estimated, as happens in very early cases of lung trouble, the fluoroscope is best, as one can graduate the X-ray light when using the fluoroscope and see what cannot be shown by photographs. For heart and diaphragm the lamp is best about

two feet from the screen. Note first the heart and diaphragm in quiet breathing, then in forced expiration and inspiration, and finally scrutinize the relative transparency of all parts of the two lungs. The positions can be marked on tracing paper, on which also the episternal notch, ensiform and nipples are located, or a large sheet of celluloid may be used for tracing. X-rays in tuberculosis of the lungs have been most useful in cases with little or no physical signs, in those with complications, such as bronchitis or emphysema which mask the tuberculous focus exists elsewhere. In pneumonia the signs are dense opacity of part or whole of lobe, restriction of diaphragm on affected side or sides, displacement of heart away from affected side, accompanied by dilatation. For a considerable time after the crisis, the affected lobe is somewhat opaque and the diaphragm's movements are impeded. Pleurisy also leaves signs of restricted movement. In pleurisy with effusion, the contour of the diaphragm is partly or wholly obscured, the heart shadow is displaced away from the fluid, and the lung is more opaque, owing to compression. In an encysted pleurisy the shadow is stationary, no matter what be the position of the patient. Interlocular effusion is readily recognized. In pneumothorax the pleural space filled with air is brighter than the normal side. Also in emphysema the lung is brighter. Intrathoracic tumors, malignant growths of lung, pleura, or mediastinal glands, bronchial tuberculosis glands, and some cases of esophageal cancer are visible. Aneurism of the aorta shows larger than it can be percussed, as does also dilated heart. Dilatation of an auricle can be distinguished from that of a ventricle. Dilatation of the esophagus at certain levels and the shade of a distended stomach may be observed after a large dose of bismuth subnitrate.

Post-Vaccinal Eruptions.

W.T. Freeman (British Journal of Dermatology for May, 1902) reports the following cases of post-vaccination eruptions:

The first patient, a weakly male, aged fifty-four, had been vaccinated about three weeks. The vaccinal reaction had been quite moderate, and at the end of the third week the scabbing process was quite complete. It was then noticed that the trunk was red, and a few sudamina were also noticed. Two days later he was found to be smothered—the whole trunk—with a bullous eruption; with a temperature of 102 deg.; and quite seven-eighths of his body, excluding the limbs, was covered with bullæ. The individual lesions were about the

size of a threepenny piece. The bullæ which were not collapsed were prominent, and were not like the flatter lesions of pemphigus foliaceus. Most of them contained a clear fluid, but some were slightly hemorrhagic. Those that had discharged their contents appeared to be drying up. An interesting pointing was the presence of two small umbilicated vesicles close to the recent vaccination scars. They looked like rather small but typical vaccinia vesicles. There were no other lesions upon the limbs. The lesions had little or no erythematous base or halo. The man complained of joint pains, and there were signs of joint swelling. He gave a rheumatic history.

All the lesions appeared simultaneously, and there were no successive crops of bullæ. Two days later his general condition had improved, and only a few blebs near the groins and shoulders remained that were not collapsed. These were still hemispherical, tense, and apparently planted on almost healthy skin.

All the bullæ eventually dried up, the temperature gradually declined, the joint swellings slowly disappeared, and in a few weeks the man was convalescent. The collapse had been very severe.

Two other cases are interesting in that they showed marked family idiosyncrasy. One, a little girl, about four years of age, was vaccinated three or four weeks before her baby brother, and within a week from the date of the operation was covered with what looked like a typical measles rash. The limbs were sparingly attacked, and the face was left alone altogether. The child was sufficiently ill to cause a certain amount of anxiety. In a few days nothing but a little pigmentation was left. The baby was vaccinated some three or four weeks after his sister, and the same kind of measly rash quickly followed upon the maturation of the vesicles. In both instances the eruption started from the vaccination area, but very quickly became generalised. Measles was, without difficulty, excluded from the diagnosis.

Infectious Goids.

According to the London Hospital Journal, many experiments have been undertaken to satisfy the medical mind that a thing that most people outside our profession have always taken for granted—namely, "colds" are "catching." That they are catching no one now doubts. It is recognized by those who have the management of sanatoria for consumptives that one of the great disadvantages attending the visits of friends is that "cold" are introduced, much to the detriment of the patients. Of course every lady knows that

"sniffly" people are as well avoided when social functions are on hand, and now a serious question is being asked—namely, should a doctor visit his patient when suffering from "cold"? In the ordinary daily life of those who go out into the world and take their chance of all infectious, who ride in trains and omnibuses and even go to church, the opportunities of infection are so many that it is probable that one more is of no moment. But to the chronic invalid shut off rigorously from external influences, the visit of a catarrhal person may undoubtedly be productive of injurious results. If ever this view should be seriously taken by the public—and they are kittle cattle to the shoe, that same public, no one knows what fancy they will take up next—the matter might become a very anxious one, not only for medical men but for those sick insurance societies which profess to give so much a week to medical men while incapacitated by illness. What is meant by incapacity?

The Normal Histology of the Human Hemolymph Glands.

Aldred Scott Warthin (American Journal of Anatomy) says that a large number of glands varying in size from that of a pinpoint to that of a large cherry and of a deep red or chocolate color are found in the prevertebral fat of the bullock and the sheep. These are known as the hemolymph glands. They are also found in the human body, occurring in greatest numbers in the prevertebral, retroperitoneal and cervical regions, in the neighborhood of the adrenal and renal vessels, along the brim of the pelvis, in the root of the mesentery and in the omentum. In cases of anemia these structures may be enlarged throughout the body so that they may be found in large numbers. In the majority of cases they are round or oval in shape and are furnished with a hilum through which vessels pass. There is usually a relatively large plexus of vessels associated with each gland, the veins, in particular, being large and prominent. It is possible that a new formation of these glands takes place in pathological conditions to compensate for spleen or for bone marrow. Warthin divides the hemolymph glands into 1, the splenolymph glands and 2, the marrowlymph glands. The splenolymph glands possess a relatively thick capsule, which contains a varying amount of unstriped muscle and very little elastic tissue, and is surrounded by adipose tissue. From the external capsule trabeculae of similar tissue extend into the gland, dividing it into irregular lobules. There is a bloodsinus immediately beneath the capsule, which sometimes extends entirely

around the periphery of the gland, but which is usually interrupted by masses of lymphoid tissue. Branches which become larger and confluent as they converge toward the hilum, pass from the peripheral sinus toward the centre of the gland. These intercommunicating bloodspace divide the lymphoid tissue into irregularly-shaped islands. The lumina of these sinuses are traversed by a coarse reticulum through the meshes of which the blood circulates. The lymphoid tissue lying between the sinuses resembles that of an ordinary lymph gland very closely. The cells of this tissue are for the most part small lymphocytes. Scattered areas and groups of hyaline substances or solitary hyaline bodies which are degenerated red blood-corpuscles are found in the reticulum. The reticulum resembles that of an ordinary lymphgland. That of the bloodsinuses is more abundant and coarser than that of the lymphsinuses of the lymphglands. The arteries enter the hilum and divide quickly into small branches that empty into the bloodsinuses, from which the blood is collected by the veins which pass out at hilum or obliquely through the capsule. The marrowlymph glands are less numerous than the splenolymph glands. They have a thin capsule with but little unstriped muscle and yellow elastic tissue. Delicate trabeculae run from this capsule toward the centre of the gland. There is a small bloodsinus beneath the capsule that usually runs entirely around the periphery and from this narrow branching sinuses accompany the trabeculae toward the centre of the gland. All of the sinuses are filled with a coarse reticulum through the meshes of which the blood circulates. The lymphoid tissue is arranged in irregular islands between the sinuses in much greater amount than in the splenolymph glands. Large numbers of fat cells are usually seen in the central portions of the gland. The reticulum of the lymphoid tissue is more delicate and contains but little elastic tissue.

Ureteral Surgery.

Coe (Amer. Journ. Med. Sci.) reports two cases of accidental division of a ureter during operation on the pelvic organs in which immediate anastomosis of the severed portions of the duct was successfully performed. In the first case the uretero-ureteral anastomosis was established by the lateral method, the distal end being closed by suture and the open proximal end inserted into the lower portion of the duct through a lateral slit made about one quarter of an inch below the ligature. In the second case direct investigation was made of the proximal into the dilated end

of the divided ureter. A third case is added in which both ureters were divided and a portion of the vesical trigone removed. Anastomosis of the left ureter with the bladder proved successful, but a large fistula remained involving the entire base of the bladder. This was subsequently treated by a plastic operation with good results. In his comments on these cases the author points out that they serve to illustrate the fact that in complicated cases, especially with intraligamentary tumours, it is sometimes impossible to identify the displaced ureters before they are injured and, therefore, that every cord, adhesion, or supposed blood vessel should be carefully inspected before it is clamped or ligatured, and again after it has been divided. When it is established beyond a doubt by the escape of urine that a ureter has been divided, nothing except a very desperate condition of the patient should deter the surgeon from at once attempting to repair the injury, instead of resorting to the unsurgical makeshift of suturing the end of the ureter to the abdominal wall, or to the serious procedure of removing a healthy kidney under the most unfavorable conditions.

The Etiology of Acute Haemorrhagic Pancreatitis.

Halsted (Johns Hopkins Hosp. Bull.,) records a case of acute haemorrhagic pancreatitis and gives details of the post-mortem examination and of some experiments undertaken to elucidate the etiology. The subject was a corpulent and robust man, aged 48, whose symptoms were very acute abdominal pain and cyanosis; the pulse was only 92, and there was no great local tenderness on palpation. The diagnosis was gall stones. Death took place in twenty-three hours after operation, at which abundant blood-stained fluid was found in the abdominal cavity, fat necrosis, haemorrhage in the region of the pancreas, and a distended common bile duct. Post mortem the pancreas was represented by a blackish swollen mass; the termination of the pancreatic duct united with the common bile duct 10 mm. from the summit of the bile papilla to form the so-called diverticulum of Vater; filling this common diverticulum was a small concretion. In this way the bile and pancreatic ducts formed a continuous channel, and the escape of both secretions was obstructed by this concretion blocking their common outlet into the duodenum. The pancreas was stained bright green with bile, and there had evidently been a regurgitation of bile along it. In a series of 17 cases examined, the pancreatic and common

bile ducts opened independently into the duodenum in 3, and in the others the diverticulum of Vater varied in size from 1 mm. to 11 mm. The pancreatitis in this case was apparently due to the action of the regurgitated bile. Experimentally it has been shown that a variety of substances injected into the duct of the pancreas cause haemorrhagic inflammation, but how far they can be used to explain the pathogenesis of human cases is doubtful. The suggestion of Hlava that gastric juice may be driven by antiperistaltic action of the intestine into the ducts is not supported by any evidence, and the relation of haemorrhagic pancreatitis to bacterial invasion from the intestine has not been demonstrated. It has been found experimentally that injection of the bile into the pancreatic duct of dogs causes a necrotizing haemorrhagic inflammation of the pancreas resembling the human lesion, and, like it, accompanied by fat necrosis. The frequent association of cholelithiasis with haemorrhagic and gangrenous pancreatitis appears to be the result of impaction of gall stones at the orifice of the diverticulum of Vater and the penetration of the bile into the pancreas.

Hepatic Contusion, Caused by Collision with a Street Car.

Anna M. Handshaw (The Woman's Medical Journal) reports the case of a man over forty years of age, who had been blind since infancy. He was struck by the hand-rail of a cable car. The primary symptoms and signs of the lesion were shock and muscular contusion, also slight injury to the floating ribs, but no fracture. The patient suffered from bradycardia and the temperature dropped below normal. He was restless and his respirations were limited. The contusion caused pain and discomfort on the change of position in bed, or when pressure was applied to the right side. As the muscles gained their integrity, the abdominal character of the breathing was restored and the pain on deep inspiration ceased. There was a sensation of oppression over the heart and lungs. Symptoms of abscess or suppuration developed. Chill and collapse, followed by rise of temperature, indicated a septic condition. There was pain in the right shoulder, jaundice, cyanosis of lips and finger nails, perspiration, vasomotor paresis, and "a feeling of a board inside of the ribs." If there was abscess it was probably incapsulated and slowly absorbed with the resulting cachectic condition of the patient. The patient left his room for the first time over three months after the accident.

Infected Ovarian Cysts.

Peterson (Amer. Jour. of Obstet. and Dis. of Women and Children, June, 1902) states that the germs may gain access to the cysts in various ways: They may pass through the cyst-wall either from the peritoneal cavity or from some other adherent viscus rich in germs; through the circulation, either directly through the arterial circulation of the pedicle, or by way of the venous circulation after the formation of a phlebitis, a retrograde infection. Infection may take place by way of the lymphatics. Germs may be introduced directly into the interior of the cyst by aspiration or puncture through the abdominal wall or vagina. Because of their small size and slow growth, dermoid cysts are more liable to traumatic changes, and to infection. When the pedicle of an ovarian cyst is twisted and the circulation completely shut off, the conditions would seem most favorable for subsequent infection of the cyst contents. The natural history of suppurating ovarian cysts, especially dermoids shows that they are prone to empty into some neighboring viscus, rectum, vagina, bladder, or even the ureter. His conclusions are as follows:

(1) Suppuration of an ovarian cyst is a most serious complication and is productive of a high mortality, with or without operation. (2) The contents of the cyst should be carefully examined bacteriologically and microscopically, in order to shed light upon the etiology and pathology of the condition. (3) There is good reason for the supposition that certain ovarian cysts reported as suppurating did not in reality contain pus, but the pathological changes were described from their gross appearance. (4) In cases in which the cyst has been shown definitely to contain pathogenic bacteria, the majority of patients operated upon by the abdominal route have died of general peritonitis. (5) Hence better results may be expected from vaginal incision and drainage in similar cases when the suppurating cysts does not reach much above the limits of the pelvis, since liability of contaminating the pelvic peritoneum will be greatly diminished.

Stomach Disorders.

Reed (Mobile Medical and Surgical Journal) states that most remedies given for dyspepsia do more harm than good, and even after a careful examination, including the modern methods in use, it is often found that hygienic and mechanical measures such as diet, free use of water, exercise, massage, electricity, etc., are better than any course of drugs. Nevertheless certain drugs are useful at certain times,

especially as palliatives, such as nerve tonics, dilute phosphoric acid, hypophosphites, etc. The rule is to begin with very small doses, gradually increasing if the effect is good. In diseases that involve the stomach, aside from the neuroses which included above, certain measures are necessary. The alkalies are usually required in excessive secretion of HCl, whether a mere functional derangement or associated with acid gastric catarrh or with round ulcer. The choice of alkali is not a matter of indifference. If no laxative is required, sodium bicarbonate is useful in doses of from 15 to 60 gr., given two hours after each meal, and in severe cases combined for a week or so with either belladonna or atropin or sometimes a combination of sodium bicarbonate 15 gr., bismuth subnitrate 15 gr., and 10 or 20 gr., magnesia, the latter drug being adjusted so as not to allow constipation to result from the bismuth. In constipated cases the increase of magnesia is of value with the belladonna. When the hyperchlorhydria has already developed into gastric ulcer, the opportunity is afforded for some of the most brilliant results obtained in the therapeutics of any chronic disease. The patient should be kept in bed and fed for three or four weeks by the rectum, and after that, careful diet by the mouth, but no irritating food. Bismuth subnitrate and subcarbonate should also be given in doses ranging from 30 to 40 and 60 grains three times a day from the beginning of treatment. It may be necessary to give alkalies and belladonna, and after two or three weeks in bed the patient may be allowed to sit up and exercise a little, but the diet should be continued. In the lack of HCl an entirely opposite method of treatment is required, and he finds nothing so useful as the administration of official dilute HCl in doses from 5 to 30 drops, usually combined with pepsin. Sometimes the doses disagree and then the appropriate dose should be added to half tumbler of water, and taken in sips every few minutes during the hour following each meal. The use of bitter tonics may also be of advantage in this condition, and massage and exercise if not contraindicated in cases of ulcer are useful. In atrophy strychnin may be of value, aiding the motor power of the stomach, though gymnastics, massage, hydrotherapy, electricity and especially intragastric Faradism will accomplish more in such atonic conditions. Dilatation may result from pyloric cramp and in such conditions and in gastralgia due to excessive HC from an unknown cause, it is possible to administer alkali in full doses. A course of arsenic may be given for the specific nerve and antineu-

ralgic action, but in severer forms of trouble due to tumor, etc., only operation is of use. In acute gastritis, after putting the patient at rest, stopping food, and allowing water in small frequent sips only, very little medicine is required except where necessary to the bowel, and then calomel 1-10 to 1-3 gr. ever half hour may be used. Warm wet compresses over the stomach and small pieces of ice internally may also be of value. If the attack persists after the calomel is employed a mixture of bismuth, 5 to 10 gr. with $\frac{1}{4}$ to $\frac{1}{2}$ drop doses of carbolic acid flavored with peppermint, frequently repeated, is very effective. In chronic atonic gastric catarrh the bismuth and carbolic mixture will accomplish generally as much as any remedy given by the mouth, but lavage every day or two with soda and common salt in the first wash water, a teaspoonful of each to the quart, followed with a weak solution of alum, $\frac{1}{2}$ dram to the quart, silver nitrate, 10 to 15 grains to the quart, or other antiseptic astringents, can do still more in skilled hands, and the diet is all important. Tumors, growths and so on require operation. In displacement there is usually no need of surgery, strychnia and diet will do something; abdominal supports, gymnastics, massage electricity, and hydrotherapy can do very much.

Perforation of the Rectum.

G. R. Turner in the *Lancet*, describes the case of a seventeen-year-old youth, admitted April 17, 1901, had been trying to vault over a broom-stick and failed. The stick passed up into his rectum, tearing a hole in his trousers and causing much pain and hemorrhage. On withdrawing it was covered with fecal material for about two inches. He was taken to the hospital, collapsed and suffering much pain. He was pale and shivering and vomited three times. On examination a tear of the anus about one inch posteriorly was found which passed up the posterior wall of the rectum for a short distance. There was also a rent in the anterior wall. The mucous membrane beyond was smooth and feces were present some three inches from the anus. The examination was difficult and indefinite, owing to spasm and pain. After this examination the patient vomited again and there was much hypogastric pain. The abdomen was rigid to palpation and moved well with respiration. He was seen by the writer eight and one-half hours after the operation; an anesthetic was given and a rectal examination in the lithotomy position was made, at which an extensive tear of the anterior wall was found passing through the rectovesical fold of the peritoneum into the general peritoneal cavity. A

sound passed through the rent was found to touch the anterior abdominal wall. There was also a tear on the posterior wall, continuing with the damage to the anus posteriorly. A four-inch incision was made above the pubes and fecal matter and foul fluid were removed from the peritoneal cavity. After much difficulty a transverse rent two inches long was found in the peritoneum between the bladder and the rectum, the serous coat having been stripped off the posterior wall of the bladder. The examination was aided by an assistant's finger in the rectum. By pulling on the bladder and by the aid of long clips the rent was eventually brought sufficiently near to the surface to admit of suture with catgut. This was effected by means of long curved needles on handles a cleft-palate rectangular needle. The peritoneum was carefully cleansed by sponging both before and after the suture of the rent and subsequently gently irrigated with water. The irrigation was purely local. A large glass drainage-tube was inserted and some strips of cyanide gauze were passed down to the peritoneal aspect of the rent, and another glass drainage-tube was introduced into the rectum beyond the tear of the bowel. After the establishment of a final fistula which healed promptly the patient recovered.

The Treatment of Summer Diarrhea.

Kerley (*Archives of Pediatrics*, June, 1902) states that in these cases we have to do with an infection, a poisoned child. The first indication is, therefore, to remove as much of the intestinal contents as possible. For this purpose, castor oil (or broken doses of calomel frequently repeated, if there is vomiting), should be given.

The greatest number of cases of this sort occurs in children under two years of age, who take milk in some form. Regardless of the source of the milk or its treatment, it must be stopped at once, because milk offers a favorable putrefactive medium for the growth of the bacteria causing the disease. This applies even to breast-fed babies, though here, as a rule, the milk need not be withdrawn for so long a period as in the case of artificially fed babies.

For substitute feeding he prefers a carbohydrate diet. A tablespoonful of Robinson's barley to the pint of water, boiled for one-half hour, or an equal quantity of whole rice, boiled for three hours, will make an acceptable food. For older children the proportion of cereal may be increased. In addition small quantities of chicken, beef and mutton broth may be given to advantage. The author does not believe in the routine administration of alcohol. Kerley has practically abandoned the

use of egg albumen water, because it is so not often digested. Boiled water is given at any time. If possible the substitute diet should be given at such times and in such quantities as the child takes of milk in health. Frequent spongings are of value, and there should be an abundance of fresh air. Of drugs, besides those mentioned, the author prefers the subnitrate of bismuth. In order to be of service the sulphide of bismuth must be formed, producing black stools. At times it is necessary to add lac sulphur (in one grain doses) to the bismuth. Opium, though of service, should be used with caution. It is given preferably in the form of Dover's powder, one-fourth to one-half grain every two or three hours for a child of one year. If heart stimulants are necessary, strychnia and strophanthus are employed.

Irrigation of the colon with normal salt solution is of value when the stools are infrequent and contain much mucus and blood. In the algid cases, with extreme prostration, an irrigation of hot salt solution (110 deg.) is a decided stimulant.

The return to milk food should be gradual, using milk diluted with barely water, and no milk is to be given till the temperature falls and the stools approximate the normal.

Cancer of the Breast.

Thos. Bryant (London Medical Press, May 21, 1902) expresses the conviction that the results of operations for cancer, whether of the breast or elsewhere, would be much better than they now are if they could always be undertaken during the early development of the disease, as illustrated by the majority of the cases; that every breast tumor, neither clearly inflammatory nor encapsuled, which seems to involve gland tissue, and may therefore be cancerous, should be at once explored and removed if found to be cancerous, with the whole gland; and that recurrent growths when localized should be similarly treated.

Bryant further says: "In advanced and neglected cases, where the lymphatic glands and covering integument are involved, Moore's, Banks', Halsted's, or Gould's so-called complete operation may be called for, but its results are not by any means so likely to be favorable as those I have reported. Lastly, in cases of recurrence not favorable for operation, unless the removal of the ovaries can be shown in the future to be successful, the X-rays should be employed, for the benefit which has been derived by this treatment when judiciously applied by men of understanding has, in my own experience, been so successful as to raise hopes which I hardly like fully to ex-

press, and at the same time seems to be free from danger or serious consequences when utilized by those who know the dangers of penetrating rays carelessly employed and the difficulties with which the practice bristles. I must, however, add that the influence of the rays, to make them effective, must be maintained for several months after it has seemed to be beneficial; a three months' course, with about three applications a week appears to be the shortest from which any permanent good is to be expected, and this treatment is full of hope."

Development of the Limbs, Body Wall and Back in Man.

Charles Russel Bardeen and Warren Harmon Lewis, in the American Journal of Anatomy, notes their conclusions, which are based on an examination of 13 human embryos, ranging in age from 2 to 7 weeks. The myotoms are the most convenient landmarks for describing the relative positions of structures, and consequently, the studies are made with these masses of tissues as a basis for describing the positions of the limb buds. At the end of the fourth week of the development about 38 myotoms have been differentiated; 3 in the occipital region, 8 in the cervical region, 12 in the thoracic region, 5 in the lumbar region, 5 in the sacral region and 5 in the coccygeal region. The arm bud appears opposite the fifth cervical to the first thoracic myotoms; the leg bud appears opposite the first lumbar to the first sacral myotoms, 11 myotoms intervening between the caudal extremity of the arm bud and the cephalic extremity of the leg bud. The limb buds and the body wall arise in the region in which the amnion joins the axis of the embryo, a portion of the amnion to which the name *membrana reuniens* has been applied. A thickening of the *membrana reuniens*, known as the *Wolffian ridge*, indicates the beginning of the limb buds, which increase in size rapidly after they make their first appearance. The limb girdle and the upper portion of the limb develop from the basal portion of the limb bud, while the forelimb and the extremity develop from the distal portion. The union of these two portions of the limb bud is flexed and becomes the elbow and the knee, respectively. As the limbs grow they gradually migrate toward the caudal extremity of the embryo until they finally occupy the positions in which they are found in the adult. During the growth of the limbs the body walls grow forward at the expense of the *membrana reuniens*. During the fifth week the myotoms give rise to a dorsoventral muscle mass in which the characteristic segmentation of the myotoms disappears. This

muscle mass becomes divided longitudinally into two great divisions, a dorsal and a ventrolateral. The dorsal musculature of the adult is derived from the former and the latter gives rise to muscles of the thorax and the abdomen. Processes from the sklerotoms, nerves and blood vessels grow into the body wall from the adjacent spinal segments. Neither the myotoms nor sklerotoms send processes into the limb buds; the skeletal and the muscular structures of the limbs are differentiated from the mesodermic tissue of the limb bud. Blood vessels and nerves, on the other hand, grow into the limb buds. The brachial plexus is formed and its branches grow into the arm during the latter half of the fourth week. The lumbosacral plexus is formed and its branches grow into the leg during the first half of the fifth week. Skeletal differentiation begins in the region of the shoulder or hip and extends distally and proximally, just before the ingrowth of the nerves. Muscle differentiation follows the entrance of a motor nerve into a given region immediately.

The Treatment of Sciatica.

Vernon A. Chapman (Canadian Journal of Medicine and Surgery) states that if nerve-stretching were more often chosen as the first rather than as the last resort, the other numerous remedies would not need to be so frequently employed. The writer gives full directions for the proper manipulations, according to the seat of the pain. The degree of force to be used must be determined by the existing conditions in each case, and must be regulated by the common sense of the operator. In severe cases the pain aroused by the manipulations is so severe that general anaesthesia must be employed for the first few treatments. In mild cases the patient himself can employ this method of nerve-stretching to a certain point. Let him stand with feet together and legs straight; then let him bend himself forward at the hips, keeping the legs straight, and touch the toes with the tips of the fingers of both hands simultaneously; or let him sit upon a firm flat surface with legs extended before him; then, by bending forward, keeping the knees unbent, grasp a foot by each hand, and firmly fix it upon the leg. This procedure will be found quite difficult at first, but can easily be performed in a short time by perseverance, and if thus practiced by the sciatica victim, will ward off any attacks of his enemy.

Malformed Fetus.

Elrington (Lancet, May 17, 1902) mentions the following case: The mother was a laborer's wife. The body of the child

was well developed and the lower part of the face was normal for an ordinary full-time child. The frontal bones, however, were widely separated and flattened backward, so as to be almost at right angles to the face. The eyes were very far apart and the eyelids protruded. The parietal bones small and what would have been their upper margins were pointing almost directly backward. The occipital bone was represented by two bony strips lying close to the posterior edges of the parietal bones. All the cervical and the upper five or six dorsal vertebrae were apparently wanting. The chin rested on the second piece of the sternum. The ears, which were abnormally large, lay in front of the shoulders. The back of the head and neck was occupied by a mass of freshly-formed blood-clots, which in one place had burst through the skin. There was no hair and the skin of the head was very thin. The labor occurred at full term and the mother was certain that the child was alive two hours before the pains began, which was only three hours before the child was born. The author had to be content with an external examination and consequently cannot say what was the condition of the brain and spinal cord. There was nothing during the pregnancy out of the ordinary except an excessive amount of liquor amnii. Dr. Elrington thinks that there is no doubt that the child died from the effect of pressure during birth. The presentation was somewhat bewildering, but the progress of the labor was rapid and the child was born with the chin presenting under the symphysis pubis without any difficulty. The arrangement of the cranial bones may have been artificially produced by a face presentation in a child with cranial bones not only very thin, but not developed sufficiently to stand the strain of pressure within the parturient canal.

Pleurisy with Effusion.

G. R. Murray, in the London Lancet, says that all cases of acute pleurisy with effusion require rest in bed for limiting the inflammation as far as possible; hot applications of linseed or linseed and mustard poultices, belladonna formentations, etc., for pain; strapping of the affected side for limiting respiratory movements and thereby decreasing discomfort; leeches, now often discarded, but really useful for decreasing local congestion. When exudation appears the surfaces of the pleura separate and the pain decreases. As soon as this occurs it is important to give a saline aperient like magnesium sulphate or sodium sulphate in large doses each morning for a number of mornings. Sodium salicylate, 20 grains three times a day, is often valu-

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able and it has been found in large quantity in the effusion itself on chemical examination. After the acute part of the attack is over at the end of the first seven or ten days iodine is of service in aiding the absorption of the fluid by the lymphatics—tincture of iodine in 5-drop doses, iodide of potash in 5 to 10-grain doses, iodoform in half from $\frac{1}{2}$ to 1 grain doses. Oleate of mercury (10 per cent.) may be rubbed into the affected side each day. Hays' method of restricting the patient to half a pint of fluid in twenty-four hours while from one-half to one-and-a-half ounces of salts in concentrated form are given each morning an hour before breakfast is highly recommended by Osler. The question of aspiration is very important. Under certain conditions it should be done without delay. In all large effusions of any stage with dullness all over one side of the back of the chest and up to the clavicle in front, aspiration should be done at once. It should never really be deferred so long, as it is better to remove some of the fluid as soon as dullness extends above the level of the fourth rib in the nipple line in front. In these large effusions delay is dangerous, as sudden death sometimes occurs. Physical signs, however, do not always indicate the amount of fluid which is present, so that in cases in which the area of dullness is less than that just indicated immediate aspiration is required if there be marked dyspnea on slight exertion, cyanosis, palpitation, irregularity in the pulse or signs of edema in the opposing lung. In cases in which the effusion is moderate in amount and produces no urgent symptoms there is no necessity for removing it during the first week or ten days. A moderate effusion is probably useful in the early stages of an acute attack of pleurisy, as it separates the two layers of the pleura, allows the lung to retract and lessens respiratory movements. As a result of this the inflamed membrane is kept at a rest as much as possible and the two surfaces are prevented from rubbing against each other and the pleura is placed under conditions which are favorable to recovery. If aspiration is carried out at this early stage, these favorable conditions are simply removed and the object is not accomplished because the fluid is apt to return. If after ten days there be no diminution in the effusion, recovery will be hastened by aspiration; if, on the other hand, absorption has already begun it is usually not required. After aspiration the patient should remain in bed for at least two or three days, and after that he may get up as soon as his general and local condition will allow. The after-treatment of a case of pleurisy with effusion is of great impor-

tance and is practically the same whether the fluid has been absorbed or removed by aspiration. The great object is to complete a re-expansion of the lung. Various forms of blowing machines and gymnastics, all of which are well known to the profession, have been devised and under proper use most of them are serviceable. That form must be selected which seems best suited to the patient's means and physical strength. As a rule, frequently repeated gymnastics, in themselves comparatively light, are better than those which are lest frequently used and in themselves comparatively severe.

ADVERTISEMENTS.

Rhinitic Gout (Hay Fever), An Expression of the Uric Acid Diathesis in the Schnelderian Membrane.

Hay fever, like appendicitis, existed before it was recognized as a disease "sui generis," and many cases were looked upon as simple catarrhal affections, and often, even as only a cold in the head.

The history of hay fever as a specific disease dates back to 1819, when Dr. John Bastock described it under the name of *catarrhal estivus*. Since then many specialists have given it careful study. Among the early investigators in this country were Dr. Morrill Wyman and Dr. George Beard, the latter having made a report of over two hundred cases. All observers seem to agree that it is a disease geographically limited to certain latitudes and altitudes, placing the cause at the door of the pollen from certain graminaceous plants, and limiting the time of occurrence from May until October. Thus, Flint says in his "Practice of Medicine"—"The affection appears not to exist in the Southern States, or in the colder regions of Canada," and Wyman claims immunity in the mountainous regions of New York, Vermont and Colorado.

The synonyms for the term hay fever, since the time of Bastock, are "Bastock's catarrh," "Rose cold," June cold, hay asthma, catarrhus autumnalis, peach cold, pollen poisoning, et al; the French Academy calling it asthma d'ete and the Germans Fruhssommarcatarrh. Besides the pollen of flowers and grasses, some writers have pointed out the effects of bright light, as an exciting cause, while still others mentions cases that were affected by certain odors from drugs, animals, feathers, perfumes, smoke, fog, cold air, hot air, etc. It was not until 1885, however, that attention was drawn to the true fundamental

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cause of this disease when Dr. S. S. Bishop promulgated his theory that the underlying cause was a neurosis, a pathological condition in which the delicate nerve terminals in the Schneiderian membrane are overstimulated by some centrifugal rather than by some centripetal element. Bishop again in 1893, in a prize essay, pointed out the centrifugal element, which is the nerve irritant, viz: uric acid. In this paper, read before the American Hay Fever Association, he claimed three factors as necessary for the development of the disease, viz: 1. Abnormally sensitive nerve centers. 2. Hyperesthesia of the peripheral termini of the sensory nerves; and 3. The presence of a large variety of irritating agents. Exclude one of these conditions and the paroxysms are prevented.

There was no controversy from this bold deflection from the straight and narrow way of the specialist, particularly on the part of those who feel that the underlying cause was malformations and hypertrophies of the turbinates: however, one by one he gained followers in his theory, particularly as the therapeutic proof was conclusive, and to-day it is the many and not the few who take Bishop's view. Dr. A. B. Conklin, in a recent paper, says: "From careful observation and an experience of half a dozen years in treating disease upon the uric acid theory. I am convinced that the lithemic diathesis renders those individuals thus affected more susceptible to an attack of hay fever, than are individuals not thus handicapped.

"Add to this the irritating influence of the pollen of rag weed and other extraneous forces upon the mucous membrane of the nose, together with the like irritating influence of abnormal growths within the nose, and I believe we can formulate a reasonable explanation of the hay fever."

For several years I have devoted myself to the study of the uric acid diathesis, and it was that study which led me to the conclusions that certain obscure hepatic derangements were purely due to this acid irritation, which views I subsequently substantiated, both pathologically, post-mortem and clinically, by anti-uric acid treatment with Colchi Sal, publishing the results in a paper entitled "Hepatic Gout." I pointed out that certain eruptions on the skin, simulating Urticaria had been attributed to uric acid, and consequently mucous membranes could be likewise affected, that gout in the liver and gout in the toe were only differences of place, not process. So likewise it seems logical to consider the similar expression in the Schneiderian membrane as gout, a veritable Rhinitic Gout, and that is answerable to treatment

without changing climate, and in most instances without operative interference, save where there was such malformation of the turbinates that breathing was interfered with, even when the patient was free from these unremic explosions. The gross morbid anatomy reveals the nose occluded; the occlusion is due to the turbinated bodies, which are enormously swollen. This swelling in most instances, is merely a dropsical effusion, in others there is a hyperplasia of the connective tissue underlying the mucosa. The appearance of the membrane is usually red; due to hyperemia, and is exquisitely sensitive to the touch, even to the point of being painful. Microscopically we find connective tissue cell proliferation, an infiltration of red and white blood corpuscles, the condition of cloudy swelling bordering on fatty degeneration. This pathological lesion is constant, but of course we must look further for the primary physiological change that precedes this change of structure, which we term a lesion. All pathological processes are preceded by these changes in function and in their earliest manifestations are known as symptoms. This uric acid, acting as an irritant upon both the nerve centers and sensitive nerve terminals, causes the first physiological change in the mucous membrane lining the nose, viz: an hyperemia, a veritable vasomotor reflex.

After this an exciting cause from without, such as a foreign body in the form of pollen, cold air, hot air, odors, etc., may exaggerate the stimulus thus given to terminal nerve irritation, and we get as a natural sequence hypercretion and the concomitant symptoms of an exaggerated coryza. Prof. Haig claims that the perspiration causes a diminution in the acidity of the urine, due to the elimination of the acid in the sweat. If the acidity of the urine is diminished then the alkalinity of the blood must necessarily be increased, which allows it to hold more nitrogenous bodies in solution, so that the greater percentage of urates in the blood the greater the stimulus to the nerve centres and the more pronounced the neural phenomena of the uric acid diathesis.

During hot weather sweating is greater, so that hay fever patients are more susceptible at this season of the year. However, there is no fixed law, for many cases have been known to occur in mid-winter.

The symptoms of this disease are diverse, according to the intensity and localization of the process. It ranges all the way from the Schneiderian membrane to the mucosa lining of the bronchioles. Even attacks of angina pectoris can be traced to the presence of uric acid in the blood to excess as

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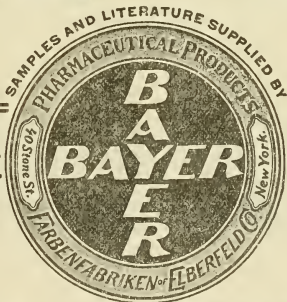
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a cause. An attack of rhinitic gout is usually made manifest to the sufferer by an itching of the hard palate and fauces, which generally extends to the nostrils, eyes and face. This is quickly followed by violent fits of sneezing, and a thin watery discharge. There is also profuse lachrimation, with occasional pains in the head, particularly in the region of the frontal sinuses. Edema of the mucous membrane rapidly follows, so that soon both nares are entirely occluded, and respirations has to be carried on solely through the mouth, which causes a dry and parched condition of the already irritated mucous membrane of the hard palate and fauces. The discharge gradually becomes less in quantity, but thicker and more viscid, the eyes become red, and swollen, and the lachrymal ducts finally excluded, due to pressure from the engorged submucous tissue. The symptoms are often relieved by the recumbent position.

There may be also swelling of the mucous membrane in the pharynx, which partly closes the Eustachian tubes by pressure, causing temporary deafness. There is slight fever, ranging as high as 100 deg. F., but never pyrexia, and the pulse quickens a little. When the process extends to the bronchii, we get wheezing, prolonged expiration, and a little dry cough, which finally resolves with expectoration. The catarrhal symptoms are, of course, more characteristic of the disease than are the asthmatic, still the latter do exist in certain cases, and can as readily be traced to a uric acid irritation as the other, and yield just as gracefully to the anti-uric-acid treatment.

The treatment of this affection is palliative and curative. For the palliative treatment many remedies have been tried, but for my part I prefer an antiseptic spray, such as Glyco-thymoline, followed by a spray of a 4% solution of cocaine. In this way the parts are kept clean, the hyperemia and edema reduced, with the concomitant hypersecretion of mucous, and a local anesthesia established. When I first began to treat cases of hay fever on the uric-acid theory basis I used the different alkaline salts with varying results, but I obtained my best results from Salicylate of Soda and Colchicum. Why these drugs acted more favorably than the others was to me a sort of "post hoc propter hoc," but after making a thorough study of their physiological action I think I can safely say it is because they are the best eliminators.

The salicylates are analgesic, diuretic, diaphoretic, antiseptic, liquefy and increase the flow of bile, reduce hyperemia by facilitating the resolution of the products of in-

flammation, and above all causes the elimination of urea, uric acid, and other solid constituents of the urine in excess.

Colchicum is the historical remedy for gout, and is known to quiet the pain of gout, increase the elimination of uric acid, waste products, promote tissue oxidation, increase the flow of bile, and is also slightly diuretic and purgative. The only disadvantage of these drugs is that the ordinary preparations cause in the case of salicylates, vertigo and cephalalgia, while colchicum is very irritating to mucous membranes and epithelial tissues. Happily, these disagreeable features have been overcome in an organic compound of both drugs, known as "Colchi Sal." This is dispensed in four minim capsules of a peculiar combination of $\frac{1}{4}$ of a milligramme of crystallized colchicum dissolved in an excess (twenty centigrammes) of natural methyl salicylate from *betula lenta*. This is an important detail, especially since the formula has been made public. Numerous substitutes, made from the artificial salicylate and colored green to imitate the true Colchi-Sal, often lead to disappointing physiological results and should be avoided.

As many as fifteen to twenty capsules daily can be administered without any deleterious results; all unpleasant symptoms, such as ringing in the ears, vertigo, delirium, congestion of the kidneys, and digestive troubles which are observed when the cheaper artificial substitutes are used, are absent in the true colchi-sal capsules. The combination is best given in small and repeated doses distributed over a certain length of time. Since I have been using it I have not only been able to relieve the attacks, but often through a course of treatment to prevent their return.

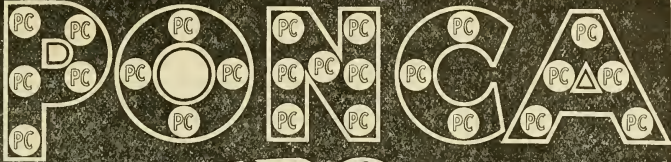
From the foregoing, then, we are forced to the conclusion, from therapeutic proofs alone, if from no other deductions, that hay fever is really a neurosis, that has its basic cause, in the excess of uric acid in the blood, which irritates the nerve centers and terminals, causing a vasomotor reflex with the concomitant hyperemia of the Schneiderian membrane, resulting in the train of symptoms that I have described above, and that the removal of this excess of uric acid from the blood relieves the symptoms and cures the disease.

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or so wearing upon the patient than our summer diarrhoea, the most fatal of which we speak is cholera infantum. These diarrhoeas are so coincident with detention, and so often present in the second summer of childhood that the laity come to consider detention as a cause rather than a factor. The Fatality usually ranges according to the strength of the child, its surroundings, and especially upon the atmospheric conditions, not so much the intense heat, but rather the humidity in the atmosphere. This latter cause preventing not only the proper functions of the skin, but also increasing nervous irritability, and with this there is an abnormal sluggishness of the absorption powers of the mucus membrane which causes a reflex irritability of the intestines.

The child run down and irritable from its teething notices immediately the changes in the temperature, while improper feeding and wrong clothing causes the patient to easily succumb. If we can teach the parents that by proper care, proper feeding and proper clothing these dread diseases may be prevented we shall have accomplished much.

The vitality and the ability to resist atmospheric changes as well as disease differs markedly between adults and babies, and thus small things which are hardly noticed by parents often cause alarming symptoms in children. The clothing of a child is important. During the hot, exhausting days in our Southern climate which are so often followed by nights so cool that the grown persons seek the fire-place, we find infants clothed only to meet one requirement. The want of forethought on the part of the parent lays a foundation for future ills.

By hygienic surroundings we are oftentimes able to greatly modify the severity.

A large percentage of this class of cases occur among those who work in factories or large cities where families are so crowded together in small, ill ventilated rooms, that the child often has to breathe polluted and poisonous atmosphere. These cases require a distinct change, and the child often brightens, and appears better, and grows stronger if it can be taken to the country, or out in the park, or down by the sea shore for the day. But by far a larger number of cases have their etiology in the improper feeding which they receive. Cows milk, especially when not sterilized or properly prepared carries irritation to the intestinal tract, while condensed milk, containing as it does a large amount of sugar, forms an improper food for babies, thus we find the healthy child, plump and fat with its sugared diet, suddenly, almost within a day, growing pale and wan because of diar-

rhoea. It is then to the feeding of the babies that we must look in order to prevent the inroads of disease. To accomplish this Lacto Preparata, a pure milk food has been prepared. It is made as near as possible in looks, consistancy and preparation of fats and solids to that of mothers milk, and the great advantage lies in the fact that it has been perfectly sterilized and will keep for any length of time in any climate, while it does not require the addition of milk to make it nutrititious. When possible it should be used in artificial feeding of our babies, however, it is not the food but to the treatment of the disease that we must turn our attention.

Take a typical case from my note book. A child fourteen months old and teething was playing about in the morning as usual. There was, however noticed by the mother that the child seemed worried, and fretted more than usual, however there seemed to be no fever, nor was the child apparently sick until six hours later when vomiting began. There had been two or three discharges during the morning, but otherwise she was not disturbed about the child. Three hours later when I was called in, the child was lying upon its back, the lips crimson, and the head tossing from side to side, the thighs flexed, a clammy sweat upon the forehead, and an extreme pallor upon the face. The discharge which had been saved for me showed masses of coagulated casein of cows milk covered with slime and mucus, this showing not only the hard indigestibility of the milk, but its irritating qualities. It seemed as though, while I was there, the face appeared wan and sickly, with a look of distress coming over it. There was a slight fever, the urine was scanty, and the abdomen showed the colon distended with gas. This is a typical picture which we so often see, and so sudden is it in its appearance that we can almost see the child slip from our grasp.

Our treatment of the cases must be prompt and vigorous. The irritating substances in the intestines must be removed, the fever allayed, the vitality increased. For the first the bowels must be thoroughly cleansed, and I find nothing better than one grain of Hydrag. c. Creta. every two hours. The lower bowels should be washed out with enema of mild salt solution at the same time the fever is allayed by placing the child in a salt bath using sea salt, and keep him there for about twenty minutes. Feeding should be stopped although the thirst may be allayed by giving a little boiled water or barley water. While the vitality and the strength to bear the attack must be kept up, and in no way can this be better accomplished than by the use

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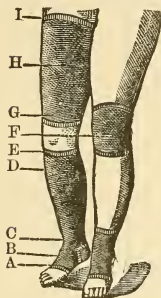
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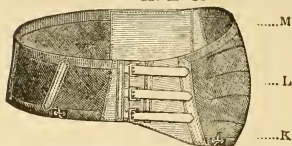
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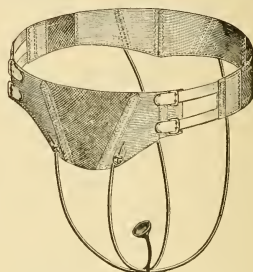
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of Protonuclein given in one grain doses every two hours. In many cases the effect is like magic, in others it must be continued for some time. On account of the marked acidity of the excretions both from the bowels and from the skin, I always find it wise to give some anti-acid as "Milk of Magnesia" alone or with a little bismuth, however, we must tell the parents of its effect the bowels less they think the darkened stool a graver form of the disease, for the intense pain and gas of the abdomen spice poultices are very desirable. Having then seen that the bowels are rid of the irritating matter, the fever allayed, plenty of fresh air and sun shine, the neutralization of the hypercidity of the secretions, and finally, the increase of the vitality and strength by the giving of Protonuclein, we then must turn our attention to the food for the child when convalescence begins.

Milk we have shown to be too indigestible to be borne by the weak stomach, and too irritating to the intestinal tract. I find nothing better to give the child during convalescence than a little Trophonine in a little water every hour as a potent factor in quick recovery. On account of its composition it seems to be correspondingly digested by the stomach, and no residue is left to annoy and irritate the intestinal tract.

After my experience with a large number of these cases I feel that the proper way to avoid summer diarrhoea is in teaching the parent how to bring up the child, but when the diarrhoea has fastened itself then prompt and vigorous measures must be enforced.

T. P. EDWARDS, M. D.,
Graniteville, S. C.

I have used Bromidia in cases of Insomnia, restlessness and threatened convulsions, with surprising results, finding that a dose of from drops 15 to one drachm to be sufficient according to age and how often to be repeated. I have combined Bromidia with Papine where I wished to annul pain with excessive nervousness, the combination acting very happily also in bladder troubles. I used Bromidia and Papine very much in my family.

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A Trip to Europe.

Dr. Frank Kraft, 57 Bell Avenue, Cleveland, Ohio, Editor of the American Physician is sending out the following circular letter to some of his friends:

I am arranging to take another party of people to Europe next year—1903—to sail the last week in June from New York for Naples, then travel north, ultimately sailing for home from Liverpool. Among the principal places in this tour will be Naples, (Pompeii and Vesuvius), Rome, Pisa, Florence, Bologna, Venice, Milan, Genoa, Como, the St. Gotthard Tunnel, the Rigi-Kulm, Lucerne, Schaffhausen, (the Falls of the Rhine), through the Black Forest to Strassburg, Heidelberg, Mayence, the Rhine to Cologne, Amsterdam, Antwerp, Brussels, Paris, (Versailles), London, Shakespeare-district, (caching-tour), Dublin, Liverpool. We will be gone from 60 to 70 days. The price per person will be \$510. This includes eating, drinking and sleeping—in bed every night—Travel-tickets on ocean, railways, lakes, rivers, channel; carriage drives with intelligent guides; and the handling and care of baggage.

I would like to have you join this select party. And, also, to send me the names of

your friends who would enjoy a tour of kind. I will be accompanied by my two daughters, so that, traveling without escort, will find it pleasant and congenial. There will be no lonesomeness or homesickness; and for other sickness—if there should be any—there will be free medical advice from the manager of the tour.

The itinerary, which will be issued as soon as all the data is in hand, will contain the days of arrival at the various places, the duration of our stay there, the names of our hotels, the general points of interest, the particular items included in the price named, and general instructions concerning clothing, baggage, money, and the like. Meantime, please keep this tour in mind, and let me hear concerning your own going, or the names of those of your acquaintances who might wish to accompany our party.

Everything will be provided for, and First-Class. We are to be a company of Americans away from home for a two-months' outing, traveling rapidly but comfortably—very, VERY little walking—with the maximum of enjoyment for our money, and the minimum of inevitable discomforts.

I will be glad to answer all letters promptly.

A physician writing to Messrs. Armour & Co., recently said: "I am highly pleased with the action of your Red Bone Marrow. It is the best agent for rebuilding after serious illness that I have as yet found."

The preparations of "Pepsin," made by Robinson-Pettet Co., are endorsed by many prominent physicians. We recommended a careful perusal of the advertisement of this well-known manufacturing house. (See page six.)

The Charlotte Medical Journal.

VOL. XXI.

CHARLOTTE, N. C., SEPTEMBER, 1902.

No. 3.

Flat Foot.

By Michael Hoks, M. D., Orthopedic Surgeon to the Presbyterian Hospital, Atlanta, Ga.

This paper is based on observations made upon twenty-seven flat foot and fifty-two pronated foot cases. A study, showing the relative frequency of their common and somewhat rare features, would be tedious. Hence, rather than tabulate a mass of varying detail, I have preferred to embody in a general consideration of the subject the main simple, useful ideas these cases suggest.

The clearest conception of the human foot's function, the preservation of that function, and its restoration, when it has been impaired or lost, can be had by looking upon the foot as a lever, and as an anatomical bridge. It has its arches composed of bones, bound together by ligaments. As a lever, the power is applied at the posterior end, the heel, the fulcrum is at the toes, the weight is applied at the ankle-joint, between these two. The calf muscles, whose bellies lie above, by the familiar attachment of their tendons to these arches, may make them rigid or permit a flexible rise and fall under the influence of the body weight, or may move a part or the whole of the structure as a unit. In addition to sustaining the body weight it has to be the instrument by which the body is propelled. This should be easy, painless, graceful. Thus poise produced by the coordinate action of the muscular supports, each muscle responding proportionately to a weight stimulus, is necessary for the organ's activity as a unit.

For these structures to do their work properly too great a strain must not be applied to one segment of the bridge; nor one, nor a group of muscles taxed more than is just, considering their size, anatomical positions, and the mechanical disadvantages under which they work. If a group of muscles is overstrained, that part of the arch they strengthen, and whose action they control, begins to yield, and the ligaments stretch; the bones rotate to unnatural limits; pain and disability follow. If the process is stopped at this point, a slight static defect results; if the organ is used too much or improperly in this partly crippled condition, the tarsal bones rotate further; there is more permanent stretching of ligaments. Allow this to continue, and in addition to the changed position of the bones, the changed mutual pressure of adjacent bones produces here body absorption; there exostoses or deformity.

The human foot follows the simple laws obeyed by similar structures sustaining weight. A study of flat foot resolves itself then into an inquiry into how the foot best carries its burden, what is the best distribution of the weight it bears, and, once a structural weakness has been produced, how one may best restore the organ's usefulness.

Presuming the foot to be intact, that the bones have the normal relationship to one another, that the muscles are strong, that there be power in the toes, that the various ranges of motion are possible to the natural limits, it is advantageous to use it in a certain manner. Observations upon the gait of athletes, agile savages, the art of the ancients, upon all the best types of the physical man, show that in walking and running the foot is placed so that its long axis points almost directly in front. When this is done the inner edge of the great toe, the inner malleolus and the inner condyle of the femur are in the same plane, and the line of the crest of the tibia, if prolonged downwards, passes off the dorsum of the foot at the cleft between the second and third toes. This position produces the greatest degree of strength, agility, and poise, with the minimum of fatigue. Fig. 1, right leg, illustrates this position. Let this be called the strong position.



Fig. 1.

With the foot in this position relative to the leg, the major portion of the body weight falls upon the external arch. This is illustrated by the imprint of the foot upon blackened paper, and by the casts taken in this position. See in Fig. 2,



Fig. 2.

imprint of a normal foot that the areas of pressure are beneath the heel, the external arch, and the ball of the foot; the internal arch has not touched except at its two ends, the heel and the head of the first metatarsal bone. A view of the normal foot from the inside illustrates the same thing, for there is an arch between the internal row of bones; beneath the external arch the soft tissues touch the surface.

For anatomical reasons this is as it should be. The external arch is very strong, resting almost flat upon the ground; it has only one joint, permitting little motion at that point; there is the strong calcaneocuboid ligament beneath holding the bones tightly together, put there for passive weight-bearing; there are no muscular attachments to this arch, hence the application of strain has little chance to produce fatigue. In this position (fig. 1) the astragalus is tilted a little outwards, and its under surface rests directly upon the os calcis, so that comparatively little weight

is transferred to the internal long arch by the head of the astragalus.

The internal long arches present the weakest parts of the foot; the weakest point in these arches is at the astragaloscaphoid articulation, the inner end of the mediotarsal joint. This is necessarily so. The arch is very flexible, the number of joints in it permitting much motion, it depends largely upon muscles for its support; these are in turn subject to fatigue.

The inner row of bones form two arches, A, B, C, D, E, F, Fig. 3; A, B, C, D, E, F, Fig. 4. That part of the body weight, which the internal arch bears, sufficient normally to cause a slight descent at D and inward excursion at D', the astragaloscaphoid articulation, giving elasticity to the step, is applied by the head of the astragalus at D and D', the weakest points in these two arches. This is the inner end of the medio-tarsal point, and may be termed the hinge, dividing the front part of the foot from the back part. Notice in Fig. 3 that the line of action of body weight applied to this arch is in direction of the axis of the astragalus, and if prolonged forward, passes through the head of the first metatarsal. Fig. 5 X-ray of normal foot in strong position, demonstrates this.

So long as the larger portion of the body weight strain falls upon the external arch, it is easy for the two internal arches to preserve their formation.

The tendency of the astragalus is to slip downward, forward and inward, the way its head points.

Arch A, B, C, D, E, F, Fig. 3 is increased by flexion of its interior end, the head of the great metatarsal. Conversely it is allowed to flatten if its anterior end is not kept flexed. The flexors of the great toe accomplish this flexion when brought into active service. The action of the

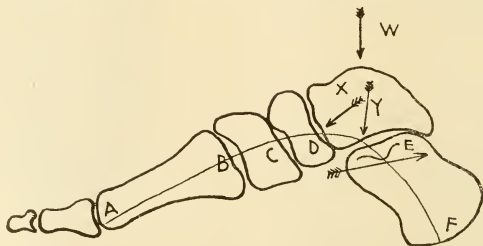


Fig. 3.

Rt. foot, inner longitudinal arch, W—Weight of body. X and Y—Components of body weight falling on inner arch tending to pronate the foot; Y is resisted by tendon (arrow) passing beneath sustentaculum tali, E; Y produces valgus rotation of the os calcis; X, the abduction of the front part of the foot, etc.

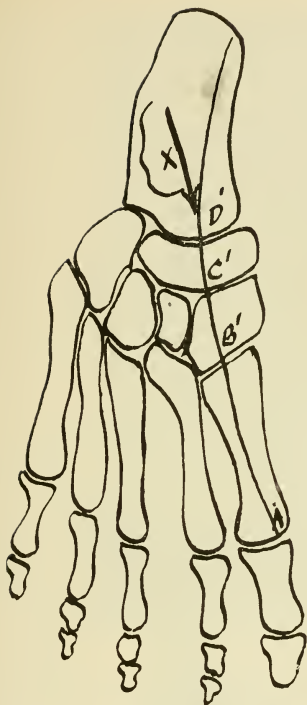


Fig. 4.

Skeleton of foot viewed from above.

anterior tibial lifts up the arch in its middle. If the anterior tibial is weakened the arch loses this support. It is seen how this keeps the head of the astragalus from slipping downward, forward and inward.

Arch A', B', C', D', E', F', Fig. 4 is increased by adduction of its anterior end, the head of the great metatarsal, and is conversely weakened by abduction of its anterior end. The adductors of the great toe and tibialis posticus accomplish this when brought into play. See Arch A', B', C', D', E', F', in fig. 5 X-ray of normal foot.

The tibialis posticus acts by pulling the scaphoid against the head of the astragalus, so as check the discussions downward and inward of the latter.

It is manifest then that flexion and adduction of the front part of the foot is the best possible position for the preservation of the internal long arches. When the foot is used in this way, the body weight is distributed in a considerate manner, the outer arch bearing the greater part of the foot strain, the inner arch being reserved for that resiliency which, when present, produces an active and graceful form of locomotion.

In the normal foot these internal arches are held intact by the ligaments and the muscles, in the above described way.

Suppose, however, the body weight is differently distributed, so that the weak inner arch takes most of the strain, as illustrated in fig. 6 in which case the line of the crest of the tibia passes off the foot at



Fig. 5.



Fig. 6.

some point off the internal arch. Soon the muscles tire; they no longer preserve adduction and flexion; then yielding of the internal arches begins. In the early stages of flat foot, that stage being illustrated by fig. 6, a type of static defect called the pronated foot, Arch A, B, C, D, E, F, is somewhat flattened, the line of the action of the body weight, *i. e.*, the prolongation of the axis of the astragalus, falls some distance inside of A. (See fig. 7.) In a well-marked case of flat foot A, B, C, D, E, F, is flat; Arch A', B', C', E', F', is reversed. (See fig. 8.) The etiology of flat foot then resolves itself into this. It is due to too much strain applied upon the inner long arches. That the strain in flat foot is upon the internal arch is seen by figures 9, slight flat foot; 10, ordinary flat foot, and 11, severest type of flat foot. Compare them with fig. 2, impression of normal foot, and notice the thickness of the imprint in each stage, extending further inward beneath the long internal arches, demonstrating that the more weight the internal arch bears the flatter it becomes.

The incidental factors producing these primal causes are :

(1) Using the foot with the toes turned out.

(2) Improperly fitting shoes. If the toes are cramped, it is painful to use the flexors of the toes, painful to complete the step by rising on the toes, impossible to walk without pain except by abducting the front part of the foot; then the fore part of the foot is not used, all the muscular work has to be done by the gastrocnemius and the tibial muscles. The latter, imposed upon in this manner, soon tire out; then the ligaments alone stand the strain, they stretch; the astragalus slips downward, forward, and inward; unless the process is checked, flat foot results.

(3) Deflection of the tibia above the ankle, and bowlegs may change the line of action of the body-weight, so that the internal arches bear more than their proportionate part of the strain. They give way with the production of flat foot.

(4) Flat foot often follows rheumatism, and rheumatoid arthritis of the ankle and tarsus. Frequently the pain in the foot after an acute or long attack of these diseases is due not to the continuation of the disease, but to the changed condition of the tarsal bones and ligaments.



Fig. 7.



Fig. 8.

(5) Acute and chronic inflammation of the knees, followed by outward deflection of the leg, may produce the condition.

(6) Acute anterior poliomyelitis paralyzing one or more muscles supporting the internal arch produces flat foot.

(7) Flat foot may be congenital.

(8) Anemia, acute diseases, great body-weight, etc., manifestly cause weakness of the muscles.

The pathological findings are clearly what they ought to be from the above con-

sideration of the dynamics of the deformity. The astragalus is turned obliquely downward, forward and inward; its head altered in position, so that its face is on the outer side; the scaphoid is rotated, and its outer side raised. Sometimes there is complete outward dislocation of the scaphoid, and alteration in the shape of the sustentaculum tali. There is always abduction and eversion of the front part of the foot.

Symptoms and Physical Signs.

These are clear-cut. The long vertical



Fig. 9.



Fig. 10.



Fig. 11.

internal arch is flattened, the long internal transverse arch is reversed. The foot is longer by just as much as the long internal vertical arch is longer than its projection upon the ground. The front part of the foot is abducted, and its outer edge rolled up. In the severer cases the scaphoid may be felt out of place, the bottom of the foot may be convex, and the posterior end of the heel raised. There is swelling just below the scaphoid, at the inner and outer sides of the ankle. Hallux valgus is often associated.

The feet usually perspire freely, are often hot, uncomfortably stiff and red, if the condition is acute. The gait is characteristically without elasticity and graceless.

Figures 12, 13, 14 and 15 illustrate the

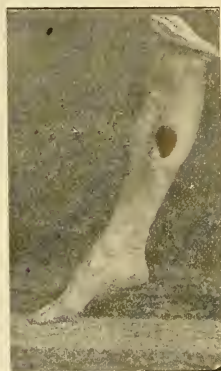


Fig. 12.

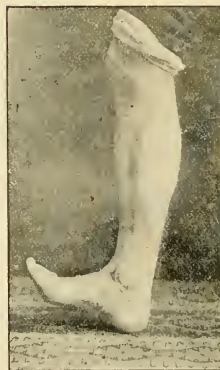


Fig. 13.



Fig. 14.



Fig. 16.



Fig. 15.



Fig. 17.

normal ranges of motion in plantar flexion, dorsal flexion, adduction, and abduction. In flat foot these ranges of motion are always limited. Dorsal flexion is usually limited to 90 degrees; adduction is often completely lost. The foot is held in the abducted position by spasm of the peroneus longus (see Fig. 16). Atrophy of the weakened muscles is often a prominent sign.

The whole foot may pain. The most prominent tender points are at the attachments of the tibial muscles, beneath the heel and beneath the external malleolus. Attacks of synovitis of the knee are frequently associated. There may be much backache from strain of the internal rotators of the thigh. Tenderness over the gluteal muscles may be present.

Figures 16, 17 and 19 illustrate the appearance of the foot in cases of average and greatest severity.



Fig. 19.

Prognosis and Treatment.

The prognosis may be viewed from two standpoints: 1st, comfort; 2d, rectification of the anatomical defect. To obtain the first is absolutely essential, the latter most desirable. One cannot expect a flat foot of mild or severe type to get well spontaneously any more than a broken-down bridge can raise itself without assistance. There are cases that do not have pain, unless the individual does a great deal of walking or standing, cases, in which the ligamentous stretching, rotation, and distortion of the bones has come to a standstill; cases in which there is no muscle spasm; cases in which coordination of the muscles has been partially established after having passed through the breaking-down painful stage. Even these, however, suffer with knee pain, hip and backache, if much exercise is taken. Usually the patient has not even this comparative ease, the symptoms growing worse with time, leading to much discomfort and disability.

The results of treatment are entirely satisfactory from the standpoint of comfort. The time required to obtain this is of course variable. Often the cessation of discomfort is immediate and lasting from the application of foot plates. Usually it takes a little time to bring this about. It is a

problem involving usually a few weeks of care, sometimes months. A presentable foot can be obtained, the degree of correction depending upon the degree of body deformity present, tendon contractures and the opportunity the patient may have for submitting to operative treatment. The cases resulting from acute or chronic arthritis and old sprains present no peculiar difficulties, and yield to treatment like the other cases.

When the defect is due to paralysis, the result depends upon what and how many muscles are affected and to what degree their lost function may be supplied by transplanting the tendons of good muscles into the paralyzed before applying the apparatus.

There is a large class of cases of mild degree presenting the usual symptoms with little or no spasm of the peroneus or extensor muscles. A case of this nature presents little limitation of the normal range of motion, but pain is produced when these motions are made to their normal limits. Such a type may be called "mobile flat foot." The use of appropriate foot plates and exercises for the weakened muscles soon reestablish foot poise and strength, giving a quick result.

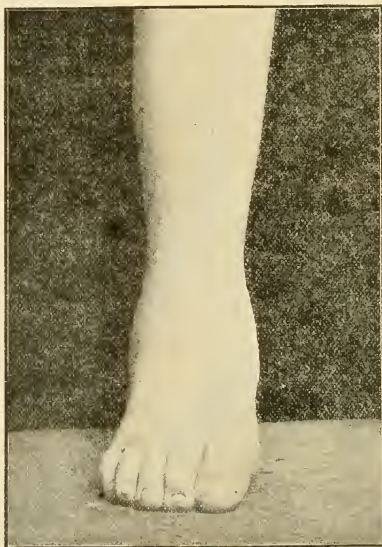


Fig. 20.

Usually, however, the spasm of the muscles is so great that any effort to place the foot in the normal attitude is associated with unbearable pain. Under these circumstances forcible correction is necessary. The patient is etherized; the foot is by manual force or the assistance of apparatus brought to an adducted and plantar flexed position. Plaster is applied; the foot is allowed to remain in plaster from one to two weeks. Then the plaster is removed.

Often one or more tendons is cut before it is possible to get the foot in a corrected attitude. After this it is necessary to apply apparatus, foot-plates. The mechanical device necessary is a spring arch so constructed that it holds the foot in the position it should have naturally. The plate must be absolutely comfortable, and must support the weakened parts of the foot so that relief from the flat foot pains is obtained. The great problem in flat foot is the shaping of these plates. If the plate presses too much here or there, the patient will have pain from that pressure. It must support the foot in just the way it needs assistance to relieve the flat-foot pains. The object is to accomplish the latter with the absence of the former.

Again, nearly all the cases present callous places under the ball of the foot beneath one or more of the heads of the metatarsal bones. This adds an additional weight distribution problem. While all feet follow the general principles of weight distribution outlined above, each has its own individual slight deviations. Each presents its own problem to be solved. Hence there is as much difference in the individual necessary forms of support as there is distinction in facial appearance in people, who look like.

Fig. 18 illustrates the type of plate ordinarily used. The plates are made of tem-

pered spring steel, gauges sixteen to twenty, depending upon the weight of the patient, and the necessary breadth and length of the splint.

To make a plate a cast of the foot is necessary. The cast is taken of the patient's foot in the corrected position, as near the position illustrated in Fig. 1 as possible. This cast is then carved in such a way that the carved cast represents the way the bones of the tarsus and metatarsus are to be supported. The area the splint is to fit beneath and support is then marked out upon the under surface of the cast. A mechanic makes the splint to fit this area. The splint is then inclosed between an upper and lower piece of leather. The completed splint then slips in the shoe like an insole. In addition to the splint, it is necessary usually to make the patient procure a pair of properly fitting shoes. The plate, however, will go in any shoe that the patient can wear with any degree of comfort.

Exercises supplement the mechanical treatment.

Fig. 19 illustrates a bad case of flat foot following infantile paralysis. The child was $3\frac{1}{2}$ years old at the time she was stricken with the paralysis. The attack was a typical one. For a time both legs were completely paralyzed. She is now nine years old. There was partial recovery of all the muscles in both legs except the tibialis anticus, posticus and flexor longus pollicis of the right leg. The result of this paralysis was the deformity shown in Fig. 20. The foot was abducted, the internal arch flat, the internal malleolus almost touching the ground when the child walked. The tendo-achillis was much shortened, dorsal flexion was not possible to 90 deg. The peroneus longus held the



Fig. 18.

foot strongly abducted. No adduction was possible.

The child was operated on three months ago. The tendon of the peroneus longus was detached at the outer edge of the foot, split and transplanted one-half into the tendon of the paralyzed flexor longus pollicis and one-half into the paralyzed tibialis pollicis. The tendo-achillis was cut. The long extensor tendons of the 2d, 3rd, and 4th toes were transplanted into the tendon of the paralyzed tibialis anticus.

In this way the foot was restored to its proper shape.

The operation was done three months ago. Fig. 20 shows the result. The correction is obvious, the position of the foot relative to the leg comparing most favorably to the "strong position" above described. The functional result will be good. Already there is a thick strong tendon filling in the gap between the ends of the severed tendo-achillis. The child is muscular. Flexion power is even now fair; likewise extension and adduction. The strength of these motions increases steadily from massage and exercises. The foot holds its position without the aid of apparatus. After the strength in the remaining good muscles is restored by massage to the tone they had before the two months of disuse incident to the operation, the patient will be allowed to walk. A foot plate will be used for awhile, perhaps permanently.

The deformity was a bad one, and illustrates nicely the results obtainable from teuoplastic surgery.

Comments on Yellow Fever and Mosquitoes.*

By R. D. Murray, M.D., Key West, Fla.

A man of one town or one epidemic can not be fully trusted on the subject of yellow fever. As I made this remark over a quarter of a century ago, then, as now, recognizing my own failings, I have since received abundant evidences of its verity. Not every man (certainly not this one) who sees the disease almost yearly and in many places is fully fitted to give bed-rock directions for the diagnosis, treatment and suppression; not every book student of the disease and not every clinical veteran is fitted to write a final account of the disease, the former charge being proven by the articles on treatment that have appeared in standard medical books, including one many-volumed "System of Medicine."

*Read before the recent meeting of the Tennessee Medical Society.

The book is yet to be printed that contains a fair pen picture of this many-phased-intensity disease and a decent account of what ought to be done when man, woman, or child is found to be sick with it.

Unfortunately as to the history of outbreaks, men have been so biased, hasty, lazy, unbelieving, credulous, or prejudiced as to give forth long accounts, with nice appearing details, which go down as truthful records; and too frequently the modesty or cowardice of an after-comer who discovers the actual facts prevents the truth from ever being told. The official statements of about nineteen-twentieths of all epidemics can be duly and properly riddled. Some of them ought to be translated into truths, so that future action might be logical and effectual.

I think that if more facts and less hypothesis and fancy had been employed in writing up the origin and progress of past outbreaks the field hand in epidemic work would find it easier to decide on cases—first, second, third, and so on to the epidemic condition. However, it is not my purpose to now descant on the "mistakes of Moses" and the prophets in the yellowpest wilderness, but to set down a few thoughts on the new and plausible (but, to me, not yet proved) theory of the disease being *solely* carried by mosquitoes.

The analogy of the anopheles and malaria and stegomyia and yellow fever is a fair one, and, from some views, very plausible; but the diseases have no point in common—except, once in a while, for a day or two, in the making of the diagnosis. I have often seen the two diseases in the same patient and publicly called attention to the fact, and have not seen an allusion to it in print earlier than my own.

It was gratifying to me that, in 1897, Dr. John Archinard found the plasmodium in a girl who was dying with yellow fever. I did not need the demonstration to make my convictions more fixed than they had been for the past twenty years.

Of course the questions will always come up, "Which mosquitoes of the hundreds of kinds were present?" and "Was the disease yellow fever?" These are fair queries always, and not always to be correctly answered. In the following instances which have come to my personal knowledge I always ask the question about the mosquitoes, but the other question is answered in the affirmative by my incident. However, if in some of the incidents there is found evidence in support of the mosquito theory, I will not be grieved; for few men can be more desirous than I am to know the "why" and the "how," for n

man has suffered more from the effects of the disease than I have.

I cannot explain all the phases of the spread except by quoting Mr. Charles Marshall, who says: "And yet some things walk in the night."

In 1870 the brig Hope carried yellow fever to the quarantine station near Philadelphia, Pa., south of the city. One patient was carried to the Municipal Hospital, north of the city. The disease spread to a mile west of where the brig lay. There was no spread of the disease at the hospital. I saw the man twice, and on one occasion carried some of his black vomit to Dr. LaRoche.

At Key West, Fla., in 1872, on Christmas Eve, W. J. B. died practically in my arms. There were no bars; mosquitoes were common; no other cases in the hospital or town. I was then non-immune, as were several others in the hospital.

1874 (August), at Key West.—Four very ill men were placed in the hospital by force of arms. Two of them died. I tried to take the disease by sleeping in the soiled blankets of Benito Lopez. No bars were used for three of the patients. The hospital was put in quarantine. No other cases occurred in the hospital, though twelve or fourteen patients were present, and there were no cases in the town. The vessel went north; and as everybody on board avoided the brig or the prison of the ship, there were no other cases.

1875 (March), at Key West.—A man was sent to the hospital, who died in a ward holding eight or nine other patients. Mosquitoes were not plentiful. There were no other cases or suspicion of a case in the hospital. About the same time two cases occurred in a distant part of the town, which could have had no possible contact with the man here or with any one connected with the hospital.

The disease was frequent the latter part of April, and continued until August, when it ceased, but not solely for want of material, for several who were much exposed suffered with the disease in after years, and some left the town, to get in other places or missed it entirely.

Those of us here who cared thought the cause of the disease was from opening up an old ditch to clean it, and that the early cessation was due to a hurricane which blew away the foul gases.

In June of that year I went, while convalescing, with a schooner load of left-over soldiers and their wives to Maticumba, where they were put into quarantine before joining the troops on Indian Key. Two men sickened on the voyage and recovered at Maticumba. There were no cases among

the troops on Indian Key, only six miles off. There was no disinfection, and mosquitoes were nearly unbearable.

18— (January), at a Garrison Town.—Two drunken soldiers slept all night on the sidewalk in a suspected part of the town. The weather was cold. No suspicious case had been in the town for four months; no bars in the hospital; no other cases among the two companies; no note as to mosquitoes; men took sick in the garrison guard-house.

1877, at Fernandina.—I have no reason to change my convictions of that year that the disease came in garbage ballast from an English port. My experience that year enabled me in a subsequent year to set the rule that stuff unfit for remaining in one town used as ballast is not fit to go into one of my towns. Thereon followed much swearing by masters and merchants and some anxiety and worry to me and other quarantine officers. But the rule is a good one, and remains. On a certain date there was one case only in Oldtown, one and one-half miles from the city; but within twenty-four hours forty-two cases were counted among the 240 residents of the hamlet. However, I cannot look back over my work at Fernandina, where the mosquitoes were not numerous enough to cause us to use bars, and see a reason to blame mosquitoes for the peculiarly sudden spread of the disease in Oldtown.

1878, at New Orleans.—James Clark, pursuer, and Thomas Elliot, engineer, of the steamship Emily B. Souder, (which vessel entered New Orleans on May 22) who died in different parts of the city, gave no hint of their fatal diseases by the consequences; in fact, there was no case in or about Hotel Dieu, where Elliot died and was cut up, until nearly four months afterwards. In the region where Clark died the history is about the same. But where the hogsheads of sugar carried by the steamer were sent the fever did occur in severe averages, and where either severe or mild cases went there were outbreaks.

The Elizabeth Thompson Yellow Fever Commission never thought of the mosquitoes while hunting for beginnings and spread, but I wish they had.

1883, at Ship Island.—Two badly-infected vessels were sent from Pensacola Quarantine. A half dozen men died in the hospital, but no one was infected, although several of the attendants were non-immune. Mosquitoes were plentiful and active.

1886, at Ship Island.—That year I had nineteen cases in the hospital. I had in my family two non-immune children, some non-immune personal attendants, and sev-

eral non-immune government attendants. I had heard of Dr. Finlay's claim as to mosquitos; and as the mosquitoes were peculiarly plentiful and troublesome, I tried to have my youngest daughter, aged 6, years, and boy, aged 10 months, get the fever. Daylight contact in a clean hospital is always ineffectual, and night contact with mosquitoes proved the same. There was no case on the island except the ship cases. My boy subsequently suffered with a plain case at Fontainebleau in 1897. The girl has not been exposed since. Since 1884 I have looked for suspicions against the mosquito.

In 1886 I made the poor or excellent test referred to; but I did not know then and do not know now what kind of mosquito lives at and comes to Ship Island. However, I do know that in 1897 cases occurred in a vessel of the Ship Island loading fleet five miles from the quarantine, and the only rational explanation was that there had been unfair contact with Biloxi—pilots or sailors or fomites. The mosquito theory will not comfortably explain the steamship St. Andrew cases, for there were over twenty-five vessels in the fleet and no other vessels suffered. If Biloxi mosquitoes had a spite against the steamship St. Andrew, I was not informed of the fact. Half-proven violation of my orders issued previously does not explain the whole business. The quarantine had non-immunes in residence and employment and had restricted communication with Biloxi, but no cases occurred among them.

1888, at Manatee.—The fever began in September, 1887, and played some havoc. One man, (Daniel Lloyd), who had six non-immune children, living back from the street in an orange grove, put his family into quarantine. During the winter and spring now and again a death occurred, and in June a big religious meeting was held, after which more cases occurred. It will be apparent to fathers that Daniel and Hannah had a quite a time to keep the children in and the neighbors out for so long a time; but in September, 1888, Mrs. Clark was going to the east side of the town to get some eggs, and was hailed by Mrs. Lloyd as to how Jackson (the last patient, who was convalescing, and whom Mrs. Clark had just helped out of bed and seated in a big chair, after which she had dressed in a light-weight woolen dress) was. Mrs. Clark said he was sitting up, whereupon Mrs. Lloyd asked her in. Baby Belle knew Mrs. Clark, and came in joy to her to be petted, and, while in Mrs. Clark's lap, fell asleep. In three days Bell had yellow fever, and but for my skill with chil-

dren she would have died. Subsequently the other five children had the fever.

This is my "awfulest" anti-mosquito instance and my most pro-clothes-on-the-person claim. Of course it is disputed; but as I was there, I believe what I write. Dan and Hannah Lloyd are yet at Manatee. The mosquitoes at Manatee must have had a chivalrous regard for Dan Lloyd's quarantine until Mrs. Lloyd let Mrs. Clark (a dear, good woman) come into the lot.

It is not permitted me to tell all I know about the disastrous fever in Florida in 1887-1888 until some more people are dead, but I prefer now to blame careless and commercial doctors more than mosquitoes for the horrors and money waste of those years. I suffered then. It is not impossible to settle on the ignominy on the mosquito, but it will be difficult to show the travels of the mosquito in winter unless more attention is given to my fad about mild yellow fever than has heretofore been given; and here I can make a suggestion about Decatur, Tallapoosa, and McHenry, but desist for want of knowledge about the mosquito.

18—, at a Tropical Town.—There were nineteen cases among Jews, five cases among Gentiles, with one death on January 4. Every one of these cases was traceable to an opened and thrown-out ditch, except three, which seemed to be contact cases. Many Jews who were in contact with cases waited to have their fever at a more death-dealing time. One Jew, who scarcely knew another one in town, made his case famous; but he got his sickness just where the others did. There are no anopheles in the town, but little spotted, brown, and black mosquitoes are very troublesome. "Items can be seen at the office."

1891, at Chandeleur.—The mosquitoes were a great plague. I had to work at sea all day and write my official letters and other letters at night, enveloped in the smoke of burning insect powder, and go to bed in the same anti-mosquito air. I had to treat twenty-six cases that season, one-half of whom were quartered in my residence. A child frequented my quarters to give me needed nourishment, for I was all the time too ill to do fairest duty. Neither she nor any other one on the station sickened with yellow fever, although nearly killed by the little flies; but she came very near dying with yellow fever in 1899 at Key West. This case is to me better evidence than my own child's case—Ship Island, 1889; Fontainebleau, 1897—but in each instance I report only what came to me.

1891, at Chandeleur.—The schooner *Nellie Blanche* arrived from Vera Cruz for Mobile with twenty tons sand ballast

(taken from the sea at Sacrificios). I could not permit the vessel to go to Mobile with the ballast, and insisted that it be put out and replaced with dipped and bichlorided granite from a non-infected ship. Neither the master nor any man on board ever visited the station or another vessel. Within three days after the said ballast was removed, the captain's son, the only non-immune sickened with yellow fever. I know nothing about the mosquitoes on board, but do know that I had to care for a boy who suffered with yellow fever, and that I then wondered why he did not have the disease in Vera Cruz Harbor. "Ballast fever" is well known to quarantine officers and mates who are anxious to get the ballast out, but yellow fever in a boy who has the best of reasons for not getting sick is not the ballast fever that is chatted about in the fore-castle and boarding houses.

1893 (July), at Brunswick.—The Spanish bark *Felo* took sand ballast at Cienfuegos, and, with battened-down hatches, arrived three weeks after. The hatches were opened at the quarantine station for the discharge of ballast and disinfection of the vessel. Within four days the mate sickened with yellow fever. This was his first voyage to the West Indies (his brother, also non-immune, died on a voyage out from Havana in September), and, with the exception of the cook, he was the only non-immune on board. The cook sickened three days after. Were the infected Cienfuegos mosquitos battened down with the ballast? It cannot be easily seen why the cook and mate did not get sick at Cienfuegos; but if the transmitters were in the hold, why they did not fall ill on the voyage is explained. Within three weeks Assistant Surgeon Branham died of yellow fever, after the disease should have been recognized in Brunswick.

1893, at Brunswick.—During the "hot time" in this port I permitted the loading of sixty-two vessels which lay along the east side of the river, and many hundreds of dollars were paid out in wages and many thousands of dollars' worth of lumber, phosphate, and cotton were loaded, and not a single case occurred among the departing crews. I consider this the greatest quarantine feat I ever performed, despite the other successful essays I have made. The vessels in question lay on the west side of Bay street and were within 200 feet of infection; and, in fact, the crews could hear the calls and groans of the sick and dying. The value of non-contact was shown in this case and why the town mosquitoes did not attack the foreign non-immune crews when the range was so short is only explained on the supposition that they were helping me

out of a bad hole. Some deserters sickened in the town, and not enough of them died; in fact, the last case and death was in a deserter.

1887, at Ocean Springs.—The fever focus was introduced in April; the disease reached its height in August, and subsided in September, before the mosquitoes left the open for winter quarters. Cases of the disease occurred in the far country if persons went there from Ocean Springs. The influences of exhaustion of material, good housekeeping, and cool nights were peculiarly noticeable as causes of cessation.

1897.—Scranton, Barclay, Ocean Springs, Bellefontaine, and Biloxi, on the east, and Bay St. Louis, on the west, suffered much with fever; but Beavoir, Gulfport, Pass Christian and Mississippi City, all laying between, did not have a case. We thought then that the escape of the middle towns of the Gulf Coast was due a rigid quarantine. It is possible that mosquitoes will not travel across a prevailing wind?

1897, at Flomaton.—The town suffered with cases for about four months. After trains were allowed to stop and passengers given a chance to get refreshments at the station hotel (built close to the track), there was not a case that went north, south, or west, although the hotel harbored several sick people. Mosquitoes were troublesome till long after the fever had ceased.

1898.—Waveland had about a dozen cases, with one death, evidently introduced by a resident who frequented New Orleans. Owing to a strict quarantine, the disease did not occur outside of the houses which were certainly within mosquito reach—east, west, and north.

1899.—Mississippi City had 150 cases, with one death. Personal contact was proven in nearly every instance. Mosquitoes were plentiful, and yet we could find no proof of the disease going where persons did not go.

1899, at New Orleans. If the fever of that year was yellow, it is noticeable that it remained in the Garden District, and did not invade the apparently unsanitary part north of Canal street. The anopheles were reported in great numbers, and many cases of malarial fever were reported from all parts of the city; but disease cases with the yellow cast were not reported from the so-called "French District." The current explanation was lack of inter-communication between the inhabitants.

If the mosquito is the "go-between" for yellow fever, what little fly or gnat distributes dengue, which in its progress is more rapid than either malaria or yellow fever? (This was written in February, 1901.—R. D. M.)

All the above written in Feb. 1901 and given unchanged.

The epidemic and clinical histories of dengue and yellow fever have more points in common than malaria has with either.

Yellow fever has been ascribed to the wrath of God, dispensation of providence, sweat of slaves, filth (mixed and otherwise), phosphorescence, phosphorus, and three or four kinds of microscopic organisms. It has "by the records" been carried about in and on nearly everything movable and has remained indefinitely in nearly everything immovable. It has been carried to sufficient places in various regions to convince one that it could be carried anywhere. Lately we are assured that it is carried from the sick to the well by the stegomyia; and the clear, fair, and repeated experiments are quite convincing.

It is unfortunate that the organism that makes the mosquito and human being sick is not agreed upon, and it is also to be regretted that the natural habitat or life condition of the yellow fever animal or plant is not known. The same may be said of the cause of nearly every infectious disease, and is no argument against the stegomyia as a transmitter. For many years I have been unable to attach much opprobrium to what is usually called "filth," in so far as cause and propagation are concerned, because I have seen the pest scourge the cleanest towns and let some dirty ones go free; and it is worthy of note that in 1900, when Havana was a "sanitarily clean" city, the fever was worst in the cleanest and most respectable portion. Not referring to any especial cleanliness, the same conditions obtained in New Orleans in 1899. Tagliapiedra Wharf or Dead Man's Hole, in Havana Harbor, was noted for many years as a peculiarly fatal nook. The army engineers cleaned out the harbor bottom close by, and removed the earth from a large area of the adjacent square, without a case of fever occurring in any of the 125 or 150 employees, many of whom were known to be non-immune. The dredged matter was sprinkled with carbolic acid or chlorinated soda after being lifted on the barges, and the shore earth was thus treated before it was dug up and after it was put on the barges for carriage to the sea. Is it fair to suggest that disinfectants, which were used in great quantities, destroyed the yellow fever causes or prevented the association of mosquitoes?

It appears that Havana suffered acutely with yellow fever after the city was clean according to a "sanitary" standpoint, but does not have the disease after effective attention has been given to the stegomyia. The query then follows: If there were no

mosquitoes in a town, could the disease be caught or transmitted in that town? In regard to the question I have to say that during an acquaintance with Key West for thirty years I have never seen a case of local origin malaria, and have been criticised for my opinion quite liberally. When I returned here in 1899, I began to look for the anopheles, but with a prejudgement that I would not find *her*. After two years and a half, I am more assured that the anopheles is not here; and it follows that I am more convinced that malaria does not occur here. Plasmodial patients have been introduced from time immemorial without distributing the disease—not as in Massachusetts, where Italian laborers on railroads have infected the local anopheles (and through them the people) with Italian malaria. Barbadoes has suffered with yellow fever, but not with malarial diseases. I wish I knew as to the presence of the anopheles, but willingly assume that that family of little flies is absent.

It has been proved that the anopheles catches and transmits the plasmodial disease; that a species of *Culex* catches and transmits bird malaria; and that the stegomyia catches and transmits yellow fever. It was first of all proved that the tick transmitted Texas cattle fever, and I have fancied that the saving of cows—i. e., dollars—rather forced the investigations in favor of people which have resulted in simplifying the prophylaxis, diagnosis, and treatment of yellow fever.

Lately Dr. Harris Graham, of Beirut, Syria, has asserted that he has satisfactorily proven the transmission of dengue by means of the *Culex*. Unfortunately, he does not name the kind of *Culex*, and for a time we will have to wait for the needful information before we can guess at the dengue-proof character of a town. The paper of Dr. Graham in the Medical Record of February 8, comes as a helpful confirmation of the work done heretofore on similar lines. Two or three species of *Culex* are charged with the transfer and propagation of elephantiasis. It will be comforting to thinking citizens to know that the special little songsters are not in their town or county. As mosquitoes can be, and will be, transmitted from place to place, and country to country, it behooves some one to find out what kinds of mosquitoes make homes in his locality, for to the patient elephantiasis is worse than all three diseases heretofore referred to.

The assumption that bedbugs cause or transmit relapsing fever has not received consolation, but a hint to housewives that "chinchies" are yet worse than bad may re-

sult in experimentation becoming possible in our country.

The evidence that fleas are the "go-between" for plague is disputed by well-know observers, but the theory is so apropos and comforting that I will not inform my "dear people" that perhaps fleas only serve the purpose that David Harum explained.

What I wish to impress in this paper is the importance or necessity of knowing what kinds of mosquito infest the locality. The mosquito theory is older than most of us, but the late facts as to the deviltry of the gnat are not well known and not old.

Key West has no anopheles, and, therefore, no malaria. Dengue has frequently afflicted the city; therefore the dengue culex is here. I have found the *C. pungens*, *C. teniorhyncus*, *C. consobrinus*, and perhaps the *C. sollicitans*; but which one transmits dengue I do not know.

There is not a case of elephantiasis on the island; and therefore we are safe from that disease, whether the transmitter is here or not. The *stegomyia fasciati* is here all the year; in fact, some are biting me while I am writing this; therefore this town has yellow fever in three weeks after a case of yellow fever arrives from abroad.

It is possible for a bright ten-year-old in an hour to learn to distinguish the three pestiferous genera—i. e., anopheles, culex, and *stegomyia*. The long palpi, darkish wings, rather greater size, and resting position will do for anopheles. The question of species can wait for the magnifying glass. The brownish color and indifferent appearance of the culex will distinguish it and them from the diamond-dusted, dolly-var-den, "calico," or tiger-spotted *stegomyia*. As between the *C. teniorhyncus* and *C. sollicitans* and the *stegomyia*, the best-sighted boy will make a decision by a closer look at the thorax.

A doctor of medicine, philosophy, divinity, veterinarianism, oculism, or music or even whitewashing is not absolutely necessary in the hunt for, or deciding on, the kinds of mosquitoes in a locality. In the time when money will be less in importance than the Holy Grail, children will have time to learn things that graybeards now long to know.

As an aid to recognition of mosquitoes I have to commend the bulletin (No. 25, 1900) of Entomological Division of the Agricultural Department, which was paid for by U. S. (us) and can be had for the asking. The privately-published book by L. O. Howard is better; but as it was written hurriedly, is not complete in description of species, costs too much, needs to be overhauled as to the "generic synopsis," and

needs more references to diseases, as well as a little bit in explanation of Greek compounds, I dare not advise the bright boy to buy it now. He had best organize a syndicate and procure for his town F. V. Theobald's "Monograph on Mosquitoes" (three volumes), whereby he and all in his town will soon become familiar with the pests and soon after will not be able to procure specimens for experiments or "exchange."

The book of books, however, is Dr. Ronald Ross' on "Mosquito Brigades, and How to Organize them." For terse command and charming wit that will be helpful this book (it costs but a trifle) beats any others I have seen, and its general distribution will do the Southland more good than any book on dollar making or moral making that I know of. Those big-moneyed men who are giving up some (to them) useless ducats could do no better work than to get Dr. R. Ross' copyright (if he has one) and distribute his book throughout the malarial and yellow fever regions; and as favor to the more enthusiastic self-helpers in a pest-ridden or pest-possible locality the work of Theobald and the next edition Howard's book could be supplied in fair ratio. However, there is no reason why the foremost thinkers may not avail themselves of the means of knowing the pest-carrying mosquitoes and how to get rid of them. If perchance the innocent brands of mosquitoes get killed, the summer boarder will file no objection.

This paper has been written amid the cases, worries and responsibilities of exacting duties, with the hope of putting others to work for themselves and their neighbors and not to exploit the writer. I trust readers will not be critical in regard to the diction, but will try to "catch on" to what I am driving at.

Naked-Eye Pathology.*

By D. W. Sherrod, A. B., M.D., Macon, Miss.

Gentlemen, much depends upon ones knowledge and extensive practical experience, and his skill in grasping important points in ready diagnosis.

It is a matter of fact that most of the practicing physicians of this age are without microscopes; and their diagnoses are made from macroscopic examination or through their knowledge of Naked-Eye Pathology and Morbid anatomy. The guiding principle of modern pathology is that pathology does not treat of any new tissue-cells or functions, but it deals with distur-

*Read before the Medico-Cherurgical Association, April 24, 1902.

bances of normal elements and their functions.

To obtain a clear and comprehensive knowledge of any disease, we must thoroughly acquaint ourselves with the body in health. We must then carefully note, first, any and all Naked-Eye departures from normal anatomy and physiology. Our knowledge thus being accurate and complete, we are ready and able at a glance to point out abnormalities that may develop in any organ or tissue.

Were we thoroughly acquainted with the structures and functions of every system, organ, cell, and cell-product of the living human body in health, we could when consulted easily pronounce a part healthy or diseased. Should we take more care in observing the varied actions of the human body differently diseased and diseased in different parts, our diagnoses would become ready, practical, and true.

Every living body is made up of individual cells with normal functions and conditions under which they are physiologically discharged. The human body is multicellular, with cells, differing to a great extent in form and function, but bound together for one common good. Thus we find muscle cells producing motion; gland cells secreting and excreting; nerve cells controlling the working of muscles glands and other tissues; certain cells set apart for production; connective tissue cells uniting and supporting the other structures; epithelium cells protecting some of the very delicate surfaces, etc.

Disease of any class of cells or of tissues formed from any class of cells, produces functional as well as formal changes in the parts thus affected and in the whole body. Every disease is characterized by certain marks or symptoms which influence the part or parts affected to such an extent that normal actions fail to be complete.

There are certain differential characteristics belonging to every disease, be it malignant or non malignant. It may be difficult to find the distinct points of differences in diseases, but the fact remains that each disease qualifies itself by certain characteristic symptoms.

In the incessant struggle for existence in cell-life, nature has imposed upon every form of cell growth to put out a sign at every injured point and to keep out such sign until complete repair has been made at that point. It is marvelous to denote the amount of care exercised by nature in removing the signs from injured places on the living body. It must teach us this lesson that repair, if it comes at all, must be gradual. Again it seems to urge this profession to model after the great and inex-

haustable physician—nature, that attempts repair in every form of disease; but is never over hasty or excited.

Gentlemen, we must have and cultivate an original and personal tendency towards the emancipation of facts in each diagnosis; such facts as can be gleaned from carefully noticing the change in figure or deformity of part.

The relative faculty through disuse falls into decay. There is a growing tendency with every profession, and especially is this true of the medical profession, to neglect that cultivated care and reflection so much need for the good of professional growth and independence. We are too willing and too well satisfied to follow old methods and opinions without stopping to carefully consider whether or not from these methods and opinions can be deduced the desired results. There is a tendency among us towards empiricism. Every profession is full of imitators. What we need is practicability. And to be practical we must use practical means.

Should we fail to diagnose a case of malarial fever because of the absence of the microscope or phonendoscope, or febrile thermometer? Would any physician with a limited amount of native genius and practical experience, hesitate to attempt a diagnosis of pneumonia, typhoid fever or even phthisis pulmonalis, because of the absence of instruments or other artificial aids? In all the above mentioned diseases there is a sufficient amount of Naked-Eye departures to warrant a correct diagnosis. But one must be observant as well as familiar with these departures. He must as has been said be thoroughly familiar with the body in health. He must be in the habit of carefully applying his natural senses and ability. We can not afford to depend entirely upon instrumentation in forming ideas of the pathological conditions that take place in diseases.

We will here notice some symptoms. In cutaneous cancer, we notice first a small insignificant sore to develop on some part of the body or face. Soon a crust forms over sore and in a very short time is removed by some natural process leaving the ulcer a little large than at first. This process continues to repeat itself; each time leaving the ulcer a little larger until its size and embolic or metastatic condition renders it inoperable.

The physiology, anatomy, and pathology of the female pelvic organs furnish a broad field for original researches in training the natural senses for practical usefulness.

From the time of Hypocrates to the present advance age in our profession, careful and skilled examinations of diseased parts

with the unaided eye have been found very essential in quick and correct diagnosis.

An increase of 10 pulse beats per minute usually indicates a rise of one degree of temperature. Now suppose the pulse beats should be 128 per minute then the temperature would usually be 103.5 should the pulse beat run up to 140 while the temperature was 100 degrees, with an increased respiration of 6 to 10 per minute, such conditions would evidently show a loss of vitality. It would show a deficiency in the oxygen carrier in the blood to produce the combustion necessary to support the vital functions.

It is an authentic fact that no two human beings are exactly alike, because in the first place scientific research is in favor of the view that the individual spermatazoa of a given male as well as the individual ova of a given female, differ materially from one another. Then we must not look for the same disease in different individuals to produce the same symptoms. Here too we are reminded of the fact that the idiosyncrasies as well as the environment of each individual patient must be studied separately. This holds good too in the administering of drugs. One individual may not be able to stand the same amount or the same kind of drugging that another individual may stand. It is the duty of physicians to know what their patients need and what they can stand.

Gentlemen, this paper is the outcome of a desire on the part of the author to refresh your memories and to inspire a more comprehensive study of the essential principles and facts of macroscopic pathology and pathologic anatomy. It is not my aim to discredit in the least microscopic examinations or the use of the microscope in determining certain morbid changes in certain cells and tissues. Every physician and scientific man should thoroughly understand the use of the microscope. More than that to be in keeping with this progressive age with all of its economic features, a physician must be thoroughly prepared in every branch of practical sciences. A knowledge of chemistry is needed in the constant application of drugs. A knowledge of botany in the preparation of drugs. A knowledge of zoology is needed in the comparing of the structures and the infections of the bodies of different living beings.

The physician who is able to combine microscopic knowledge with the gift of macroscopic knowledge in making examinations and forming diagnoses is a phenomenon of incomparable interest and worth and certainly is the most brilliant representative of the medical profession.

Now availing myself of the generous sympathy with which I have been received by you, gentlemen, I will now conclude by saying, we must do as Socrates did; never cease to reason about the nature of things.

Tobacco Heart: What is it and What its Treatment?

By Frank D. Maine, M. D., of Springfield, Mass.

It seems befitting to seek the columns of your journal to answer the oft-repeated inquiry, "What is a tobacco-heart?" Before answering directly the interesting question, however, it were well to state a few facts relative both to the heart and to tobacco.

First, the heart, though not a unit in structure, is in composition largely of muscular tissue.

Second, its situation is within the left chest and the weight in an average-sized man is about nine ounces; in a woman of like physique, about eight ounces. Moreover, it is divided into four cavities; the two upper are known as auricles, the two lower as ventricles. By the alternate contraction and dilation of these receptacles the blood, having been oxygenated in the lungs, is sent to all parts of the organism. Now the perfection by which this physiological function is accomplished depends upon the normal, vigorous condition of this "fountain of life."

Concerning tobacco it is authoritatively stated that, besides a variety of ingredients entering into its composition, "the chemical examination of a tobacco leaf shows its surface dotted with minute glands, which contain an oil, found in no other plant, the proportion of which being seven per cent. of the weight of the leaf." This oil is known as nicotine; and it is this alkaloid, the active principle of the plant, one of the subtlest of poisons, that, united with ammonia, ever more or less present, imparts the pungent odor and determines the strength of tobacco.

We are now prepared to speak of the toxic or poisonous effect of tobacco, its therapeutic action not to be considered in this connection. Nicotine, in a word, primarily lowers the circulation, quickens the respiration, and excites the muscular system; but its *ultimate* effect is general exhaustion. As administered even in the most minute doses, the results are alarming, and in a larger quantity will occasion a man's death in from two to five minutes.

"The effect on the heart," in the ordinary uses of tobacco-smoking and chewing, "is not caused by direction, but rather by paralyzing the minute vessels which form the batteries, so to speak, of the nervous system. The heart, freed from their con-

tol, increases the rapidity of its strokes, with an apparent accesion, but *real* waste of force."

The longest nerve emerging from the base of the brain, the pneumogastric, supplies with its numerous branches the motive power for the functional activity of lungs, heart and digestive apparatus, respectively. Tobacco acts injuriously upon this nerve throughout its extensive distribution, producing relaxation and paralysis more or less complete, in proportion to the degree and extent of its use, of the involuntary muscles, as applied to the vital organs just mentioned. Proof of this indirect invasion I have repeatedly observed in the congestive cough and dyspeptic symptoms, more or less manifest, seen in connection with a well-pronounced "tobacco heart." The characteristic signs of the latter are more than the rapidity of its strokes, nervous palpitation, and waste of vital force, to which I have referred, irritability being always present, and one of the most conspicuous effects in irregularity of the heart's normal, rhythmic pulsations. By the prolonged use of tobacco, hypertrophy or thickening of the left ventricle, or even of the entire heart, may obtain by the disturbed innervation and overaction of this organ.

The treatment is for the most part negative—total abstinence. Even disappearance of the hypertrophy, says Osler, may take place upon the discontinuance of the use of tobacco. This, together with a proper observance of the laws of hygiene, and occasional appropriate, internally administered, doses of strychnine, prescribed by a competent physician, may suffice for a complete recovery.

The Therapeutic Uses of Tobacco.

In a recent paper on "Tobacco Heart, What is it and What its Treatment, I discussed *exclusively* the toxic effect of "nicotine"—the active principle of Tobacco in, or upon the human organism. In this article I propose to discuss briefly its therapeutic value as a remedial agent. The leaf only is officinal.

Without entering into the history or the habitual uses of tobacco, will say, in passing, that it is indigenous to tropical America and "was early adopted by the Spaniards from the American Indians; was introduced into France by 'Nicot' in 1560, and Sir Walter Raleigh is said to have introduced the practice of smoking" of the weed "into England."

It is frequently remarked that nothing exists in the vegetable world that does not, if properly understood and applied, serve a remedial purpose to mankind. Be that as it may, it is a fact that some of most

virulent poisons are known to be of great therapeutic value. Tobacco is no exception. Great caution, however should be observed both as to the dose and mode of administration. It is also truly said, "what's one man's meat is another man's poison." The great susceptibility on the part of some and especially of the young, to the deleterious effects of tobacco, while upon others a similar dose acting kindly even beneficially, is, at once, a *pat* illustration of the truthfulness of the above proposition.

To get at the medicinal properties of this drug it were well to know its effects upon the organism of immoderately administered. Its toxic effect upon the pneumogastric nerve and medulla oblongata is that of complete relaxation and paralysis of the involuntary muscular system. Through the "vagi," also the digestive system is powerfully affected. According to Bartholow the emetic effect of tobacco is doubtless the product of three factors; its central action, its local visitation of the gastric mucous membrane, and its specific emetic property. The secretions of the intestinal mucous membrane are increased, and the muscular layer is thrown into tetanic contraction, whence the catharsis which follows its administration." Its chief characteristic is a deathly nausea, accompanied by pallor, vertigo, cold sweat and intermittent pulse.

From these toxic effects the medical properties of tobacco may, in a word, be said to be sedative, narcotic, anti-nauseant, antispasmodic, and it is known also to be diuretic.

The therapeutic range of this drug as a deduction from the above recorded toxic effects is as follows:

Diseases originating in cerebral irritation, followed by marked gastric symptoms; nervous diseases and heart affections, accompanied by deathly nausea; sea sickness; cholera, cholera infantum; asthma; incarcerated hernia; asphyxia; angina pectoris, and even lock-jaw.

Notwithstanding this wide scope of its medicinal application, tobacco, because of its irritating and indeed dangerous effects, is practically abandoned by the "Old School" as a medicine. It would be, truly, a great rarity to-day to find this drug as an ingredient in the composition of a physician's prescription. Occasionally, though very seldom, it is given as an emetic. Thus administered its "*modus operandi*" is largely mechanical, and only *indirectly* remedial as would be shown in the riddance of a poison to save life.

Dose, its Preparation and Manner of Administration.

An infusion reduced to but barely the taste, as a maximum, to an infinitesimal attenuation, as a minimum, should constitute the varying dose. It may be administered either by the mouth, or preferably, subcutaneously, as is "antitoxin." The judgment of the physician to determine, from the age, susceptibility, etc., the size and frequency of the portion.

Thus given according to indications within the above mentioned therapeutic range, the curative or ameliorative, action may be expected of tobacco for the conditions therein enumerated.

"Make Haste Slowly."

By L. W. Atlee, Philadelphia, Pa.

To the man not in the battle is given a clearer view of the proceedings and a better understanding of the various movements than to one in the thick of the fight. With this end in view we would suggest to the "up-to-date" surgeon that he lay aside for a time his instruments yet warm and reeking with the life blood of his subjects and consider a little the good he may be accomplishing by his practices.

Very little can be learned from the current literature as to the value of new operative procedures, for it is well known the tendency of successful cases have to appear in print. Many an embryo specialist adopts some new surgical procedure of which he has read from foreign sources, mostly Teutonic, and then having subjected some unfortunate in his power (hospital material) to the operation, scribbles a paper which he reads before his Medical Society and assumes an authoritative manner and diction that greatly impresses the less brilliant and slower-minded of his audience, and last but not least, it brings to him a fresh holocaust of victims for his experiments, (the word is used in the accepted meaning).

Man is an imitative animal, what the big "bell-whether" does so do all the smaller sheep, and baa loudly as he does. Fortunately for the medical profession there are among us a few who are strongly conservative and immediately take alarm at anything new, viewing with suspicion and distrust. If this party were large and influential all advance along desirable lines would be impossible, and be quite as much obstructed as the undesirable, but they are apparently only of sufficient force to keep down somewhat the thoughtless and head-long enthusiasm of the iconoclast who would do away with what is old only because it is old, overlooking the fact that

nothing is valueless from such a reason, a surgical method or idea is only obsolete when we have something truly more beneficial to replace it. Perhaps the two most remarkable occurrences in a surgical way that have been going the rounds of medical literature of late have been the suggestion by a Scotchman that stenosis of the mitral orifice of the heart be treated as a surgical affection; and that certain forms of chronic Bright's disease be also subjected to the ever advancing surgeon's knife. It is only a question now of a very short time for the appearance of the "embryo-specialist" with his paper before the medical public relating his experience with some unfortunates that have come into his power. How little is really told of the human vivisections which are going on every day in the great cities crowded with the lowest types of European ignorance and degradation of the race, the veritable "man with the hoe." The fatal cases and the future histories of the successful cases are a vast blank left to be filled in by him who thinks.

Of course the good judgement and the universal desire of the medical profession to do good to their patient ultimately prevails, and the operations that deserve to pass away into innocuous desuetude always do so, such procedures as the attempted enlargement of the cranial cavity of idiots are practically abandoned, the logical view of the more thinking men made it evident the brain made its case and not vice versa. Among the operations that should have and apparently have been largely done away with are the removals of the uterine appendages for manifestations of the hysterical or neuresthetic nature as well as for more grave mental disturbances, it is well known the post operative conditions are even worse than before their performances, but any one going about with his eyes and ears open will have the fact forced upon him that a great many of these operations are still being done. The proof of this being the great number of successful results going the rounds of doctor's offices seeking relief for the post operative conditions.

There was a time when a vast deal of tinkering was done to the os or cervix uteri, the same class of practitioner who were in the ranks of the cervix-tinkers, at present, does conservative operations in the pelvis.

From the pelvis let us turn our attention to the endless operations that are being done to the higher abdominal viscera. Who can read with out a feeling of horror of the mutilations practiced on cases of cirrhosis of the liver in its last stages, these gratings of the omentum or the abdominal peritoneum.

Or the futile butchery of the gastro-enterotomy for gastric cancer. Is there not such a thing as allowing a human creature to die in peace when absolutely hopeless are his chances for either cure or relief by the knife?

As to the gall-bladder and hepatic ducts, one is not safe to call in a physician now if there be symptoms or suggestions of gall-stones, for he will surely be operated on, and how fearful the mortality of these procedures, and how rare it is to see a death from gall-stone when their frequency is taken into consideration.

One hardly dares mention the appendix, the general practitioner's mind is so full of the supposed terrors of "gangrenous appendicitis and green groins" that he no longer feels the courage to attempt to conduct a stomach ache safely to a cure, but in the face of the "immediate operation" advisers we have no less valuable diction of Treves (Brit. Med. Jour. 02) that the mortality from immediate operations in all cases is 20%, while medical treatment alone gives a mortality of only 5%.

In this vigorous onslaught of surgery to do *something*, apparently, no matter what, the lungs have not escaped and many a poor devil is helped to shuffle off this mortal coil by having his thorax laid open and what not done to his lung!

What a delightful field this go-ahead surgeon has in the prostate gland. Let any man over forty years of age with a little vesicle irritation beware lest he gets into the hands of one of these fellows, galvano-cauterizations and enucleations are hanging over his head, he will be burned out by one, scraped out by another, or scooped out by a third.

If space were available one could throw light on much in this "ultra-radical-desire-to-do-something" surgery in many yet unmentioned directions, but it is our wish only to call the general attention of the medical men who keep quite up-to-date with such matters, of the dangers his patients may have to undergo if they should fall into the hands of this class of surgeons. That modern surgery will emerge from this macabron of undesirable operations we have no doubt, but to be cleansed she is going through a terrible ordeal.

Cancer, Once More.

By William Alexander Armstrong, M. D.

It is certainly gratifying to know that the arguments set forth in the Medical Summary of September last have not proved good seed sowed on barren ground. While many practitioners are still in doubt

as to the possibility of there being really a tangible cure for "TRUE" CANCER, outside of "the knife and caustic plasters," which have proven dismal failures over and over again, and while the "X" rays have been employed, with a certain amount of success, barring certain dangerous features, unaccountable and unavoidable very often, which deter many physicians from the Roentgen discovery being made use of.

While with Induction-Galvano-Faradism, it is next to impossible to inflict painful and annoying burns, owing to sensation acting as a guide (and due care being exercised by the operator in watching the effects). There is no comparison between the two, as far as possible injury is concerned.

In substantiation of these facts no better proof can be adduced than the following letter received from a physician who was at his wit's end as to what to do with a case of uterine cancer under his care. Excessive pain was a prominent and annoying symptom; opiates, while affording temporary relief, were losing their effects, to say nothing of untoward bad effects. The Doctor wrote me asking information, and was advised to try Induction-Galvano-Faradism. The next mail brought a draft for \$300, with a request that an apparatus be sent him as soon as possible. As everything has to be made to order, it required some time to assemble all the parts; finally the whole installation was shipped, great care being taken that no mistake could be made possible by tagging every part, and full directions given as to the assembling. The shipping was done on July 7, 1902. A few days ago the following letter was received:

"RULO, RICHARDSON CO., NEB.,

"July 28, 1902.

"Dr. William Alexander Armstrong,
"Philadelphia, Pa., 1808 North Park
"Avenue.

"DEAR DOCTOR: I received the apparatus all in good condition * * I had no trouble getting it in working condition, and have given my UTERINE CANCER patient *one treatment*. I must thank you for the work you saved me in putting the parts together and marking all the connections. I can assure you this kindness was highly appreciated.

"My patient compliments the soothing effects of the treatment AND SAYS SHE WAS ENTIRELY RELIEVED OF PAIN. I have another case, cancer of the face, which I will report results later. Again thanking you for your kindness, I am,

"Very truly yours,

"J. C. SHEPHERD, M. D."

As my apparatus and method were criticised in the Medical Summary some time ago, it is with satisfaction and pride that results such as are contained in above letter is submitted to "progressive" physicians. While "One swallow does not make a summer," Dr. Shepherd has obtained identical results with those I published one year ago in September, 1901, Summary. Other practitioners can do likewise if they only make up their minds to test that which has proved of value.

Not only in cancer is this treatment valuable, but in all those innumerable, perplexing cases, both chronic and acute, where the physician, after administering every known remedy, finds his patient not a particle improved. The revitalizing effect, energizing each and every function of the body, soon lends additional force to the remedies employed. Smaller doses become more effective than the larger ones previously used without the I. G. F. treatment.

When will physicians realize that cancer is NOT A LOCAL DISEASE, BUT A CONSTITUTIONAL ONE? The renowned Scotch physician, Dr. Alexander Monroe, of Edinburgh, testified that he had witnessed sixty odd extirpations of the breast in women for cancer, by the knife. NOT TWO OF THESE REMAINED FREE FROM MALIGNANCY AFTER THE OPERATION. THOSE IN WHOM HE WITNESSED A RELAPSE, THE DISEASE RETURNED WITH GREATER VIOLENCE! MADE MORE PROGRESS, AND PAIN WAS GREATLY INTENSIFIED. MUCH MORE SO THAN IN THOSE WHO HAD NOT BEEN OPERATED ON. Nor is Dr. Monroe alone in observations of this kind. Drs. Sir Astley Cooper, Velpeau, Carmichael, Lebert, Broca, Boyer, Curveilhier, Abernethy and a vast number of eminent German surgeons coincide with Dr. Monroe. Of one hundred cancer cases operated on by Dr. Mayo, he claimed that only FIVE were benefited. To these may be added the cases reported in the Medical Summary for September, 1901, by the writer, and the subject continued in the succeeding numbers of that most interesting publication up to and including April, 1902. With such crushing testimony to read in nearly every medical periodical "of the importance of EARLY OPERATION," certainly makes one "very weary." Like many of the old and antiquated notions which still obtain in medical practice, the "old fogeys" keep on sacrificing precious lives, regardless of consequences, possibly because cancers, on account of their terribly

nauseating odor, are not the most desirable sores to tarry with long.

Can physicians who persist in these barbarous practices consider themselves progressive? Will the plea of incredulity or ignorance exonerate them from these CRIMES (no other term will apply)?

Life is fleeting fast; there are but a short time allotted to us to establish this treatment among the younger generation of physicians, and it is with this end in view that so much has been written, in hopes that this great truth will become universally known and put into practice before the last summons arrive for us to depart.

Drugs in the Summer Diarrhea of Children.

By Maurice Ostheimer, A.B., M.D., of Philadelphia. Instructor in Children's Diseases, University of Pennsylvania; Physician to the Children's Dispensary, University Hospital; Physician to the Medical Dispensary, St. Christopher's Hospital for Children, Philadelphia.

While well understood in the larger cities at present, the treatment of summer diarrhea, in infants and young children, as practised throughout the United States can, as yet, hardly be called ideal. For medical men, especially those graduated over ten years ago, never having learned the efficacy of good general hygiene, still rely mainly upon drugs. The value of the so-called starvation treatment of children who, during the hot weather, develop what is termed summer diarrhea, is to them unknown.

Yet the experience of the past few years, as is shown by the dispensary services (1) of all the hospitals of our larger cities, points to this as the main feature in the treatment of summer diarrhea. This temporary starvation, as it seems to the mother, is accomplished by stopping all milk or other food as soon as symptoms of summer diarrhea appear. As a balm to the feelings of the mother, who fears that such treatment will weaken her child, barley water is, as a rule, given. Plain boiled water or albumen water, however, acts almost as well, since it is only desired to give the stomach a complete rest. Nor should frequent bathing or sponging, and plenty of fresh air and water to drink be forgotten. Then in two or three days, when diarrhea and fever have disappeared, milk is to be given again, in gradually increasing amounts.

(1) C. G. Kerley, Archives of Pediatrics, August, 1901, and June, 1902: J. H. McKee, T. S. Westcott, W. L. Harris, and M. Ostheimer, Philadelphia Medical Journal, July 26, 1902.

The great mistake made by older physician is to write a prescription containing many astringents, or an odd mixture of laxatives and astringents. Such medication not only will not check the diarrhea, but soon also causes the development of more pronounced gastric symptoms. It is far better to give one dose of castor oil, from one to four drams, depending upon the age of the child, or divided doses of calomel, where there is also vomiting. In by far the greater majority of cases these are the only drugs needed. It should, however, be added that astringents do become necessary when diarrhea persists over five days after the administration of the castor oil or calomel. Then large doses of bismuth are indicated, from 10 to 20 grains every three hours; should there be pain, tenesmus, or marked nervous symptoms, 1-4 minim doses of the deodorized tincture of opium are to be given besides.

When the bowel movements are scanty but loose, and contain blood and much mucus, nothing is better than enteroclysis, with warm or cold normal salt solution, depending upon the child's temperature. This should not, however, be overdone, one or two such enemata, on successive or alternate days, proving sufficient. Salol in 1-2 grain doses may be added to the calomel or bismuth should there be a tendency to fever. Whisky or brandy is not indicated, except in those cases in which, from the duration of the diarrhea, decided weakness has resulted. Even then panopeptone, liquid peptonoids, or some similar preparation is better. From 15 to 30 drops may be added to the barley water, or given separately in water, every three hours. For strengthening the child during convalescence, a few drops of tincture of nux vomica is best.

From these remarks it will be seen that very few drugs are to be employed in the treatment of summer diarrhea. I cannot protest too vehemently against the common mixture of astringents and laxatives, so generally in use. For the gastro-intestinal condition is in all such cases indefinitely prolonged. In many cases the mother in despair calls in another physician, who, realizing that illness is due to retained intestinal contents by simply giving calomel or castor oil, quickly cures the child. When the system of overdrugging is stopped, general hygiene remembered, and the starvation plan followed, rapid recovery will follow, often so rapid as to surprise the attending physician.

Action of Acetate of Lead on the Erythrocyte.

By Francis Juat, A. B., M. D., Aberdeen, N. C.

My attention was called to this subject on reading a paper by Drs. C. Y. White and William Pepper on Granular Degeneration of the Erythrocyte in the "American Journal of the Medical Sciences" for September, 1901, in which it was stated that besides finding this degeneration occasionally in chlorosis, pernicious anæmia, lymphatic and myelogenous Leukæmia, malaria and other, mostly septic diseases, it was *always* found in chronic lead poisoning (Saturnine) even long before any subjective or other objective symptoms could be demonstrated. The same authors, joined by Prof. Alfred Stengel, published in the same periodical for May, 1902, a second paper containing new proof, although only of a negative nature, that the granules are of protoplasmic and *not* of nuclear origin. This second paper contains also a complete bibliography on the subject to date. The authors succeeded in demonstrating the granulations with many stains, but recommend especially eosinhamatoxylin and Thionin pheniqué of which they give the formula. As I have been doing nearly all my routine blood work with Jenner's stain made according to the directions of Dr. Simon, found in his work on "Clinical Diagnosis," I used it also for this investigation and it gave me better pictures than the eosinhamatoxylin which I alone compared with it. But this may only be due to my having mastered the technique of Jenner's stain better and to its simplicity, since it does not require any fixation by heat or formol-alcohol 1%, etc., and only an exposure of from 3 to 5 minutes, with rapid passing through a flame after drying. The granulations are stained dark blue.

I examined the blood of 12 patients, including myself, after administration of the salt of lead for several days, and found granular erythrocyte in each case. The shortest time was 48 hours after first dose. My dosage was of course a medicinal one, and never exceeded 4 grains pro dosi, except on experimenting upon myself, when I ingested 0.5 gramme ($7\frac{1}{2}$ grains) thrice daily for 2 days. I may add that my patients were suffering with diarrhoeas, while I was perfectly well. I never came across large granulations and saw only very small ones, and am not certain whether I would have seen them with a 1-6 in. objective had I not located and studied them beforehand with a 1-12 in. oil immersion objective and a $\frac{3}{4}$ in. ocular. The granulated corpuscles were never numerous, although I distinctly

remember having seen as many as 3 in a field.

Having in this way satisfied myself as to the capability of lead acetate to induce in a most important tissue such a fundamental change, otherwise only seen in grave diseases as above mentioned, I come to the conclusion that we should not use lead at all as a therapeutic agent, or only when all other astringents have failed, and even then for as short a time as possible.

The fact that I do not find any mention of this action of lead salts in the latest text books on therapeutics and materia medica to which I have access should be a sufficient excuse for the publication of this notice.

What Protects the Jews from Tuberculosis.

It is a well-established fact that the Jews as a race, are relatively exempt from the ravages of tuberculosis. According to the contagion theory of this disease, there cannot reasonably be any such thing as racial immunity, and certainly there nothing in the habits or surroundings or mode of life of the Jewish people that would protect them from the influence of contagion according to the current theories of our time. Yet we are everywhere confronted by the fact that Jews are notably free from pulmonary consumption. Statistics show conclusively that the Jews are, more than any other class of people, subjected to all of the theoretical factors which tend to produce tuberculosis, such as in-door occupations, overcrowding in the tenement districts of large cities, poor food and a meagre allowance of ordinary necessities. In all parts of the world the Jews live in crowded colonies in the larger cities. Their surroundings are generally of the worst.

Their occupations, largely those of tailors and dealers in second-hand goods, should according to accepted theories, expose them to infection by the tubercle-bacilli. Again, the ceaseless persecution to which they are subjected in every country on the globe, and the consequent care anxiety and worry which persecution has imposed upon them, ought to make them susceptible to a degree unknown amongst most other classes. Nevertheless, statistics clearly show that the Jews suffer very much less proportionately, from pulmonary tuberculosis, than any other race of people.

It must be conceded that this immunity of the Jews is a hard proposition for the bacteriologists, and so far no rational solution has been propounded. A friend at our elbow suggests that possibly the Jews are the chosen people who will ultimately show the fallacy of considering bacterial infection as the chief cause of tuberculosis. —*Indian Medical Record.*

A Case of Rheumatic Hyperpyrexia Followed by Symptoms Resembling Those of Disseminated Sclerosis.

Allen and Russell, in the London Lancet, July 19, 1902, describes the case of a butcher, aged thirty years, who had an acute rheumatism running its course in three days, but after exposure developed a very high temperature—107 deg.—108 deg. F.—with violent delirium. It was controlled by cold packs, but rose again next day, the thermometer register reaching its maximum, 115 deg. He became delirious, later unconscious with cyanosis and shallow and irregular breathing, and was apparently moribund. The pulse was good, however, and cold water vigorously applied again brought down the temperature. During the packs he had several convulsions. There was a slow return to consciousness, lasting over several days, with some intermittent and partial return of the high temperature. On his regaining consciousness it was found that he articulated with great difficulty and that he was extremely ataxic in the legs. Eight months later he was unable to walk or stand without support. With help he walked with short steps, putting each foot forward with great care and much unevenness of movement. On standing with the feet together and the eyes shut there was complete loss of balance. The coordination of the upper extremities was similarly, though to a less extent, affected. The movements of the hands and fingers were unsteady, and writing was almost impossible, the pen spluttering and catching on the paper and the attempt being given up in despair. When examined some eighteen months after the original attack, symptoms resembling in a general way those of disseminated sclerosis were present and a similar finding followed an examination two years after. Reference is made to a similar case previously reported by Foxwell. In this latter case the suggestion was made by the author that the symptoms pointed to a diffused inflammation occupying the substance of the medulla and the lower half of the pons.

A Case of Jacksonian Epilepsy Caused by Tumor of the Brain.

In the American Journal of Medical Sciences Drs. Burr and Taylor report a case of brain tumor, the first signs of which manifested themselves in an epileptic attack. These attacks were repeated from time to time. Later, he complained of headache, which came on suddenly and passed off gradually. His eyesight rapidly failed on account of the rapidly increasing choked disk in each eye. Diagnosis of

brain tumor was made. Its location was more difficult to determine. There was entire absence of palsy, so the motor cortex could scarcely be the primary seat of the disease. Sensibility in all forms, and the stereognostic faculty were preserved, so the region immediately posterior to the motor area was excluded. But it seemed that the tumor must be situated near the motor cortex or the convulsions would not all have begun locally. Hence, the tumor was located for operative purposes, in the prefrontal lobe, adjacent to but not invading the motor area. At operation a large osteoplastic flap in the right parietal region over the Rolandic area was made. There was great tension, and when the dura was cut a mass of brain tissue came out in the pre-Rolandic region. This mass had no distinct outline. A large mass, about the size of a hen's egg, was removed. There was total palsy of the left side, following the operation. Surgically, the patient was well in ten days. Microscopical examination of the tissue removed at operation failed to reveal any evidence of tumor. This disease lasted for seven years, and it was almost six years before any other symptoms than the fits appeared. Generally cerebral disease is much more rapid. Necropsy could not be obtained. Another interesting point was muscular wasting of the palsied side, which came on acutely. The error at the operation was the removal of inflammatory tissue, while the tumor was left behind. This was due to the pathological appearance of the brain by which the operators were misled.

Puerperal Septicaemia.

Vineberg, in the Medical News, states that every case of puerperal sepsis is a wound-fever or a wound-infection, and should be treated as such. Each case of puerperal sepsis, however slight, should be carefully watched from the onset. We cannot tell into what it may develop. When a case of uterine sepsis progresses unfavorably after curetting, irrigation, and proper general treatment, as evidenced by the pulse, temperature, and the conditions of the uterus, we are justified in opening the abdomen and removing the uterus unless we find some conditions outside of the uterus to account for the persistence of the sepsis, or some condition in the uterus itself, as a single intramural abscess or a localized gangrene, which would admit of removal without ablation of the whole organ. When a uterine infection extends to a tube or ovary, setting up a violent grade of salpingitis or ovarian abscess, the abdomen should be opened without delay and the affected tube or ovary removed. When

a uterine infection sets up a septic peritonitis, the abdomen should be opened and the uterus ablated, the peritoneal cavity flushed with saline solution, and free drainage employed through the vaginal opening. To operate for these conditions when the patient is evidently moribund is unjustifiable and can only discredit the profession.

Pulmonary Tuberculosis as an Insurance Problem.

Greene, in the Medical Examiner, holds that the present requirements of a majority of insurance companies and the usual methods of insurance examiners are not sufficient to exclude persons suffering from incipient or arrested tuberculosis. Improper preparation of the patient is a fertile source of error, and should be covered by specific instructions and direct inquiry, as is now done in but few instances. Light weight in an applicant should lead to a careful scrutiny in every case, and suggests an afternoon appointment for temperature determination. Many accepted as sound light weights are actually cases of incipient or arrested tuberculosis. Heavy weights cannot be accepted at their face value. Recent loss of weight is suggestive and important. It is important that the "best" weight should be stated. No blank known to the writer contains the latter inquiry. Hoarseness should arouse suspicion, and be met by postponement until recovery. The determination of the body temperature is extremely important and its present neglect inexplicable. The physical signs of tuberculosis are obscure and require skill and judgment, both in their detection and the weighing of their importance. The proper attitude, viz., demonstration of the normal, greatly simplifies matters. A knowledge of the normal chest is all important. Unilateral hyperresonance is as important as unilateral dullness, and absence of the normal breath sounds no less significant than the presence of abnormal sounds. Broadly speaking, the examiner must rely more upon auscultation than percussion. No one sign available to the insurance examiner is pathognomonic, and hasty conclusions are deplorable and disastrous. The tuberculin reaction and demonstration of tubercle bacilli in sputum are impracticable measures, save in the case of sub-standard lives. Greater stress should be laid upon the question of direct infection, and specific questions in relation to environment should be inserted in every medical blank.

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CANCER OF THE UTERUS; IMPORTANCE OF ITS EARLY DETECTION.

During the past year much has been written regarding cancer of the uterine cervix, especially has early detection of this disease been receiving carefully worked out consideration and study. Since the earlier in its advent the disease is recognized and surgical procedure is undertaken the more successful will be the results and the statistics will present a more encouraging aspect to those doing, as well as to those requiring the surgical service; besides this result of a more successful and beneficial outcome of the attempt to eradicate the pathological growth will encourage individuals affected to apply and accept surgical relief earlier, rather than procrastinate under a delusive supposition that the condition is due to the menopause or some such deceptive cause as is so frequently the way, and thus by the early attention still further raise the per centage of successful work.

"Cancer of the uterus constitutes one-third of all the cases of cancer in women, and ninety-five per cent. of all cases of cancer of the uterus originate from the cervix." "Cancer of the uterus is primarily a local infection, and in this stage a cure by operation is possible." "Later no operation can eradicate it. Polak, "the early diagnosis of uterine cancer."—N. Y. Med. Journal, July 19, 1902.

With such facts in the case there is the best reasons for the earnest efforts to attain proficiency in its early recognition and thus be able to realize the best results toward saving life and bestowing comfort and hope to the afflicted.

The family physician will have the first opportunity to recognize or detect this condition; hence the importance of being alert as to the symptoms which first pronounce the developing condition.

Later periods in the course of the disease, when the uterus and adjoining tissues are affected, the opportunity for relief is lost and the case is beyond cure.

Skene, Disease of Women, Sec. Ed. p. 407 says: "There is no doubt but that there is such a condition as a predisposition to malignant disease" * * * "it is well known however, that certain peculiarities of organization predisposes to malignant diseases."

Such being recognized we have here an incentive and a law to govern us, and to lead us to know when to look for a possible developing condition. When we have a family history of this kind, it will be well to have the individual warned regarding the indications of the inception of this condition, that heed may be given to any first expressions of the commencing cancer. That cancer is possible, need not be told, but to instruct so that should those symptoms occur indicating such an invasion that they be reported at once to some physician.

Besides such susceptible persons should be guarded against the conditions which otherwise ignored, might lead to a development of the disease.

Polak, in the article mentioned above, maintains that the disease can be recognized in the beginning of its development by conditions which it causes or which may occur; among them are intermenstrual, prolonged or excessive menstrual flow, free and excessive leucorrhœa and spotting after effort or coitus. In all such irregularities there should be a careful physical and pathological investigation carried out to ascertain the presence or absence of developing cancer or to find the true reason for the irregular display.

In this way, the individual infected may receive that opportunity for surgical aid which may be denied her later.

Polak in concluding his article sums up as follows:

1. The early diagnosis is possible.
2. The early symptoms differ, depending upon whether the disease begins during menstrual life, or after the menopause.
3. During menstrual life, compare every bleeding with what it has been in the same woman. Be suspicious of intermenstrual spotting and serous discharge.
4. After the menopause any serous or sanguinous discharge is significant.
5. Examine every woman over thirty who may exhibit any menstrual vagary or persistent leucorrhœa.

Finally limit radical operations to those cases in which the disease is confined to the uterine tissues.

THE MORPHINE HABIT AND SOME REMEDIES.

One of the immoral and debasing habits as well as physical suicidal tendencies that is making inroads upon the human family, and during the last few years has been increasing in numbers of its victims, is that of morphine or opium habit. There is scarcely a physician but who comes frequently, in fact too frequently, in contact with its victims, and many times have to

contend with its complicating effect in the usual physical irregularities in every-day treatment of disease.

Even it is recognized that the ranks of the medical profession is not proof against the vile snares of this vice, notwithstanding their knowledge of its blighting effect.

The progress through the process of treatment by various forms is quite distressing and difficult to both patient and physician, and the result has many times proved futile, the subject going back to the habit even after being entirely freed from it. So unsuccessful have been much of the efforts in this disease that a good result is ever despaired of.

A course of treatment which has been found to give in the experience of a number of practitioners the best results with the least distressing accompaniments, and that which is recognized to promise the most successful in its lasting effects, is known as the "Mattison Method," which is the substitution in large doses of bromide of sodium and the rapid withdrawal of the opiate; so that the amount of morphia be entirely withdrawn in ten days, while the system is saturated with the bromide.

Osler says, *Practice of Medicine*: "The patient should be in bed the first ten days."

W. P. Ivey, in a paper read before the North Carolina Medical Society, June 10, 1902 (see the *Charlotte Medical Journal* for June, 1902,), says: "First put the patient to bed, absolutely, as much to bed as if he were in the third week of typhoid fever."

The course for a successful result is to have a definite rational line of procedure. A firm attendant, who will be able to carry out the treatment. An important addition is a submissive disposition on the part of the patient, or that the patient desires to be relieved of the habit and will thus aid in the effort. T. J. Happel, Trenton, Tenn., in a paper before the American Medical Association, 1900, well remarks: "If the patient honestly desires to abandon the drug it can gradually be withdrawn without much discomfort."

When we realize the extent and enormity to which this drug is used it behooves the medical profession to study the matter very seriously, that we become masters of the situation. There is much force in Ivey's remark when he says " * * * every single blessed one of us will be certain to run afoul the opium inebriate. And he is likely to be an acquaintance of long standing and not easily shaken." And yet he must be very pessimistic who would argue against the feasibility of lessening the evil, since there is a positive opportunity wherein curative and preventative treatment can

accomplish much toward reducing the habit to a minimum. Here several points are pertinent in this matter. First of all, every physician should make use of opiates only when strictly compelled to do so that his patient may have relief from pain of an unbearable nature and when no other method or means will serve. Besides, then it should be used entirely without the knowledge of the patients, as to what is used. What is used need not and should not be made known, nor should any patient or individual ever be directed to use the drug by his own hands.

The sale of opiates should be thoroughly guarded, so that none but physicians, chemists, or those entitled to use or administer the drug could obtain it under any circumstances whatsoever. Why it may readily be purchased at any cross-roads or corner grocery store is certainly a problem that no honorable excuse of an answer can be given.

It is the duty of every State and Territorial medical society to bring such pressure upon the legislative bodies of their respective States to frame and make such statutes that opium of all forms be allowed only on the shelves of druggists or in physician's office, to be used only in filling prescriptions or by the physician in actual treatment of disease. So, also, should the internal laws of the United States constrict this narcotic drug in its sale and use.

THE PHYSICIAN AS A TEACHER OF HYGIENE AND SANITATION.

The health of the entire mass of the people of a nation is a consideration of the greatest importance, in the intellectual, social and commercial welfare of that people.

The same benefit holds true to each community with equal force. To have such means and influences in operation, with which to secure the best results for the community in the promotion of health and physical development of its individual residents, is a condition to be desired.

The enlightenment and instruction of individuals in general and personal hygiene and sanitary laws in a way to carry confidence and secure the application of such means, becomes the course to attain the full benefit in this direction. The members of the medical profession, the physician in general practice, has within himself the means and opportunity to exert the influence toward instructing and leading the individuals of his community, or those with whom he is allied in his every day social and professional intercourse toward a manner of living which will add to the

physical improvement of the individual of the community; such influence exerted by the entire profession showing its effect upon the whole population of our country.

The upright and intelligent physician who has the confidence and kindly feeling of his community or those of his clientele has an opportunity to exert an influence by his example and advice, that will lead his people to observe those laws and adopt those means which will prevent disease, and help to eradicate sickness more quickly when it does come, as well as aiding in the suppression of contagious and infectious forms of disease when a community is threatened.

The way to make such results successful and become effective devolves upon the members, individually, of the medical profession, to become thoroughly enlightened, regarding the laws or means recognized by our highest authorities on hygiene and sanitary practice; that they may be ever ready to advise and suggest when the opportunity presents. The Medical Schools should devote more attention to instruction in these two branches of medicine, since, "The ounce of preventive medicine is greater than the pound of cure."

BOOK REVIEWS.

Woolsey's Surgical Anatomy. Applied Surgical Anatomy Regionally Presented, for the use of students and practitioners of medicine. By Geo. Woolsey, A. B., M. D., Professor of Anatomy and Clinical Surgery in the Cornell University Medical College; Surgeon to Bellevue Hospital, etc. Octavo, 511 pages, with 125 illustrations, including 59 full-page inset plates in black and colors. Cloth, \$5.00, net. Leather, \$6.00, net. Lea Brothers & Co., Philadelphia and New York, 1902.

The author understands anatomy, both as a science in itself and as a means to an end. It underlies the whole of medicine, and constitutes a large portion of the practice of surgery. Clear ideas of the structure underneath must precede any use of the knife. Consequently a book like the present, which joins anatomy and surgery, is indispensable to all who have or may have surgery to do, be they surgeons, general practitioners or students. To the latter class it would be doubly helpful, for the practical applications of any subject are powerful digestants, promoting the solution and assimilation of the masses of crude anatomical facts with which students load themselves, aiding and prolonging their memory as against the dreaded day of the

State license examinations, and qualifying them for the practice of surgery. Such a work relieves the study of anatomy of much of its difficulty, and will be one of the books which the new graduate will carry with him from college to office. It is a good investment for any one. The author has abundantly illustrated his pages with large and handsome plates in colors.

A Textbook of the practice of Medicine. By James M. Anders, M. D., Ph.D., L.L.D., Professor of the Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia, etc. Fifth Edition, thoroughly revised. 8 vo., pp. 1,297. Illustrated. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$5.50.

"When a book has reached its fifth edition within a period of 4 years from the date of its first publication, it would seem that the duty of the reviewer is scarcely more than to record the fact. That Anders' Practice is a popular book is evident from the rapid exhaustion of previous editions; that it fully merits its popularity is evident to all that have occasion to read it. In the present edition, while careful scrutiny has been given to all parts of the book, the most noteworthy alterations are to be found in the section devoted to a discussion of the infectious diseases. In particular the articles on malaria, yellow fever, typhoid fever, diphtheric dysentery, parasitic hemoptysis, cerebrospinal meningitis, and tuberculosis have been carefully revised, while new articles treating of fatty infiltration of the heart, streptococcus pneumonia, and acute diffuse interstitial nephritis have been added. The volume is characterized by systematic arrangement of facts, by detailed discussions of symptomatology and differential diagnosis, and by minute directions for treatment. On the whole it is a book to be heartily recommended."

The writer has an attractive style. While he deals rather briefly with subjects, he expresses himself clearly and logically.

A Brief of Necroscopy and Its Medico-Legal Relations. By Gustav Schmitt, M. D., 3 $\frac{3}{4}$ x 6 $\frac{1}{4}$ in., leather, 186 pp. \$1.00, net. Funk & Wagnalls Company, New York and London.

This pocket manual has been prepared to meet the special needs of physicians, lawyers and expert witnesses. It supplies in brief form, and yet with every essential detail, all practical facts connected with the study, diagnosis, technique, and the medico-legal aspect of a post-mortem examination. To the physician the advan-

tage of the book is apparent. The suddenness of a call to make a post-mortem examination leaves little time for him to post himself on the subject. It is unpleasant as well as inconvenient to carry along a medical library for reference. By reason of its size, Dr. Schmitt's little manual can always be slipped into the pocket to serve as a complete guide for whatever emergency may arise. It also means to the physician protection from the law. It is of great value when he makes a section and again when he reports upon the case. It prepares him to give testimony, and so saves him from the badgering of attorneys and the criticism of the general public.

On the other hand, it assists the attorney in cross-examination, especially upon the points as to whether the post-mortem was conducted according to law, and whether the diagnosis was correct.

To the expert witness it is a post-mortem in a nut-shell.

Of the present work, Dr. John B. Huber, who was, under Mayor Strong's administration, Coroner's Physician of New York County, writes as follows:

"The book is an essential contribution to practical medical literature. I have examined the manuscript with a great deal of pleasure and yet with a feeling of personal regret. For me it has come too late. When I was a coroner's physician, I sought in vain for some such work. I had to wander through ponderous tomes for the information which is here given concisely and exactly."

Modern Obstetrics: General and Operative, W. A. Newman Dorland, A. M., M. D., Assistant Demonstrator of Obstetrics, University of Pennsylvania; Associate Gynecology, Philadelphia Polyclinic. Second edition, rewritten and greatly enlarged. Cloth, 8vo. 797 pp., with 201 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901.

A comparison of the present volume with its predecessor shows evidence of careful revision and many additions, which bring it fully up to date.

The important subject of puerperal sepsis is carefully elaborated, especial attention being paid to the most recent views with regard to pathology and treatment.

Chapter VI deals with the pathology of the new-born in a clear and thorough manner. Puerperal eclampsia is considered at length, attention being given to the modern theory of autointoxication. The sections on prophylaxis and treatment are well written, as are also the chapters on ectopic gestation, the induction of premature labor, and the manual dilation of the cervix.

The chapters on operative obstetrics are entirely in the line with the most approved modern teaching. As an evidence of the thoroughness of the revision, we find a careful description of the condition known as *deciduoma malignum*.

The chapters on the physiology, hygiene, and mechanism of labor are duly elaborated. The illustrations (many of which are new) are clear and helpful, the style is direct and pleasing.

The author and publishers of this book are to be congratulated upon the very excellent character of this work.

Lockwood's Practice of Medicine. By George Roe Lockwood, M. D., Professor of Practice in the Woman's Medical College of the New York Infirmary. Second edition, revised and enlarged. Octavo volume of 847 pages, with 79 illustrations and 20 full-page plates. Cloth, \$4 net. Philadelphia and London: W. B. Saunders & Co.

This book of over a thousand pages is well written, and is invaluable to the busy practitioner. Many changes have been made in this volume which makes it a much more valuable book than the former edition. Dr. Lockwood is a fine teacher, a clear, logical writer, and he has a peculiar gift in making his points appreciated.

A Text-Book of Embryology. By John C. Heisler, M. D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia. Second Edition, thoroughly Revised. Octavo volume of 405 pages; handsomely illustrated. Philadelphia and London: W. B. Saunders & Company. 1901. Cloth, \$2.50 net.

The need for a text-book on embryology has been admirably met in this volume. It gives a succinct outline of the processes of development from the embryo told in such a way as to make a connected story. The understanding of these facts is necessary to a comprehension of many pathological conditions and should therefore be familiar to every physician. It is admirably adapted for the use of Students as a text-book and for them it is evidently primarily intended. The large number of illustrations seems not only to embellish the volume, but increase its usefulness. In this new, second, edition the chapters dealing with the Placenta and Chorion have been largely rewritten and several new illustrations have been added.

In every chapter evidences of a careful revision can be seen. Many improvements are noticeable, and no doubt the present volume will be more favorably received than its predecessor.

A Text-Book of Obstetrics: By Barton Cook Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania. Third Edition, Thoroughly Revised and Enlarged. Royal Octavo, 873 pages, with 704 illustrations, many of them in colors. Philadelphia and London: W. B. Saunders & Co. Cloth, \$5.00, net. 1901.

It is hard to conceive of a more complete and practical book on Obstetrics than this. It handles the subject in a masterly fashion, with infinite detail and exactness in the statement of facts, yet the subject matter is condensed into a comparatively small space and presented with admirable clearness. The scientific phases of the subject receive especial care,—as the physiology, the pathology and anomalies of the female genital organs, and the mechanism of labor. Nothing is omitted. The illustrations are unusually fine and add very much to the value of the book. Nor is the practical part of the subject neglected. The treatment of the accidents and diseases receives full consideration and is thoroughly modern. This book should be in every physician's library and we heartily recommend its perusal by all interested in the subject.

No book on the subject of obstetrics has been published in many years that should receive a more substantial endorsement than this.

A Text-Book of Diseases of Women: By Charles B. Penrose, M. D., Ph. D., formerly Professor of Gynecology in the University of Pennsylvania. Fourth Edition, Revised. Octavo volume of 537 pages, handsomely illustrated. Philadelphia and London: W. B. Saunders & Co. Cloth, \$3.75, net. 1901.

Those desiring a work of moderate size and price, dealing with the subject of the Diseases of Women, will be pleased with Dr. Penrose's book. It avoids the discussion of theories and deals with facts. There is no "padding," and his statements are pointed, practical and yet free from dogmatism. The facts of the anatomy, physiology and pathology of the female generative organs are also generally omitted. If needed they may be found in more technical works or in the usual text-books dealing with such subjects. The book is intended primarily for the student, but deserves a place in the physician's library.

It is hard to conceive a more practical book on diseases of women than this. The writer handles the subjects in a masterly fashion, with an exactness in his statements that impresses the reader very favorably.

A Laboratory Course in Bacteriology. For the Use of Medical, Agricultural and Industrial Students. By Frederic P. Gorham, A. M., Professor of Biology, Brown University; Bacteriologist to the Health Department, Providence, R. I. Philadelphia and London: W. B. Saunders & Co., 1901.

This is a practical book written by a practical man, and will serve as a good manual for students of this interesting science. It is not for medical students alone, but for those interested in industrial and agricultural bacteriology as well, presenting the subject in a general way so as to lay the foundation for later specialization in any branch of bacteriology.

It gives us pleasure to add our favorable opinion to the large number of complimentary remarks that have been made upon this book by the medical press throughout the country.

Grayson's Laryngology: A Treatise on the Diseases of the Throat, Nose and the associated affections of the Ear. By Charles P. Grayson, M. D., Lecturer on and Instructor in Laryngology, in the Medical Department, University of Pennsylvania. In one octavo volume of 540 pages, with 129 engravings, and 8 colored plates. Cloth \$3.50 net. Lea Brothers & Co., Philadelphia and New York, 1902.

Dr. Grayson's new work is comprehensive in two very important senses, namely, in the various classes of readers wants it will meet, and in the amount of information offered to them. Specialists will find the latest knowledge, general practitioners will appreciate its clearness in instructions for examination and diagnosis, and particularly its therapeutics, and students will get a good grounding readily. It is a book that will save waste of the reader's gray matter, for the author has a singularly clear and concise style, and it would be difficult to change a word in one of his sentences. His preface may be allowed to speak as to the therapeutical characteristics of the book. In it Dr. Grayson says: "In many of the recently published works that deal with the diseases of these specialized regions so great a number of remedies will be found, and such a generous variety in the methods of treatment suggested, that they can scarcely fail to prove embarrassing to the younger or the less experienced reader. The author has endeavored to eliminate this difficulty of choice by giving under each disease but one plan of treatment—that which he has found to have been most often successful in subduing its symptoms and shortening

its duration. In doing this, however, he has not overlooked the complicated and the exceptional cases such as will now and again occur in everyone's experience, and for these one or several modifications of the routine plan are added which may be adopted or still further modified at discretion. Moreover, although no written description can ever attain the value of clinical instruction, an attempt has been made to approach this by dwelling at such length upon each distinct detail of examination and of the therapeutic technique that the reader will miss the benefit of clinical teaching as little as possible."

Illustrations in black and colors have been used wherever they could be helpful, and in anticipation of a very wide usage, the work has been issued at a very moderate price.

Pathological Technique. A Practical Manual for Workers in Pathological Histology, including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By Frank P. Mallory, A. M., M. D., Associate Professor of Pathology, Harvard University Medical School; and James H. Wright, A. M., M. D., Instructor in Pathology, Harvard University Medical School. Second Edition, Revised and Enlarged. Octavo, Four Hundred and Thirty-two Pages, with One Hundred and Thirty-seven Illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$3.00.

In revising the book for the new edition the authors have kept in view the needs of the laboratory worker, whether student, practitioner or pathologist, for a practical manual of histological and bacteriological methods in the study of pathological material. Many parts have been rewritten, many new methods have been added, and the number of illustrations has been considerably increased. The majority of the latter are beautiful original photomicrographs of various species of bacteria. Among the many changes and additions to this edition may be mentioned the amplification of the description of the Parasite of Actinomycosis and the insertion of descriptions of the Bacillus of Bubonic Plague, of the Parasite of Mycetoma, and Wright's methods for the cultivation of Anaerobic Bacteria. There have also been added new staining methods for elastic tissue by Weigert, for bone by Schmorl, and for connective tissue by Mallory. The new edition of this valuable work keeps pace with the great advances made in pathology, and will continue to be a most useful laboratory

and *post-mortem* guide, full of practical information.

The issuing of this book will be welcomed by those who are familiar with the first edition. As a guide to the general practitioner and a text-book for the student, we heartily endorse and recommend it.

Atlas and Epitome of Special Pathologic Histology. By Docent Dr. Hermann Dürck, of the Pathologic Institute of Munich. Edited by Ludvig Hektoen, M. D., Professor of Pathology in Rush Medical College. Chicago. Volume ii. Liver; Urinary Organs; Sexual Organs; Nervous System; Skin; Muscles; Bones. With 123 Colored Illustrations on 60 Lithographic Plates and 192 pages of Text. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$3.00, net.

The present is the second volume, which completes special pathological histology. This volume is executed with the same careful and scientific scholarship which was so evident in its predecessor. A valuable feature of the work is the special stress which is laid upon the logical connection between the microscopical and macroscopical changes of diseased organs. The book can be safely recommended as an excellent, concise exposition of its subject. Its beautiful plates are a graphic assistance to the text.

Ever since the first edition of this work came out we have frequently referred to its pages for entertainment and instruction. We have always found it of great value.

ABSTRACTS of the Leading Articles of the Month.

The Surgical Treatment of Bright's Disease.

Ramon Guiteras at the recent meeting of the American Association of the Genito-Urinary Surgeons, gave an extensive review of the literature and history of the subject, and pointed out that the first operation for Bright's disease was performed by Harrison in 1878, in a case of subacute nephritis following scarlatina and accompanied by lumbar pain. The diagnosis was renal abscess, but on performing nephrotomy nothing but a medical nephritis was found. The albuminuria and the pain disappeared after nephrotomy in this case. Here then we have the first operation for a medical nephritis, but it must be remembered that Harrison had thought that in this case there was a surgical condition present, namely, a renal abscess, so that he really did not operate upon the kidney

with the specific object of curing a nephritis. Since that time Harrison has operated on several cases of a similar character and noted that the relief of renal tension produced by nephrotomy induced a regression of the nephritis. Newman, of Glasgow published, some years later, two cases of nephritis in which nephropexy, performed on account of the mobility of the organ, was followed by an improvement in the Bright's disease. Since 1886 a number of cases of chronic Bright's disease have been operated upon by nephrectomy and nephrotomy, usually when there was a nephralgia or a hematuria or both, or else when some surgical condition, such as stone, tumor, suppuration, etc., was suspected. Israel's work showed that the so-called essential hematurias and nephralgias are frequently dependent upon chronic nephritis, and that in such cases nephrotomy is of benefit. The writer does not consider, however, chronic Bright's disease without these symptoms as amenable to surgical treatment, and emphatically denies his intention of treating ordinary typical cases of Bright's disease by nephrotomy. Edebohls, of New York, was the first to operate upon kidneys with chronic Bright's disease with the specific object of curing the nephritis, and not simply for the purpose of relieving symptoms, or with the expectation of finding some strictly surgical condition. Edebohls operated upon eighteen patients, in sixteen of whom he performed nephropexy by a method involving the stripping of the capsule from one-half of the organ, and anchoring it to the posterior abdominal wall, while in the remaining two cases he simply decapsulated the kidneys and cut away the capsule without anchoring the kidney afterwards. There was no mortality in this group of cases and the results were such as to justify the further employment of this operation (decapsulation) as a means of treating chronic nephritis.

He reported two cases of chronic Bright's disease, which he operated upon by stripping the capsule. The first case was that of a man, aged seventy-nine years, in which complete double decapsulation was performed, the second that of a woman, age thirty-five years, in whom a partial decapsulation and nephropexy was performed. In a third case a woman, age forty-four years, who was suffering from chronic nephritis, but who was in fair condition, collapsed on the operating table before the kidneys had been exposed, and was resuscitated with difficulty.

The first case reported by the author was operated upon over a month ago, and has already shown improvement. The second

case was operated upon two weeks before the presentation of this report, and sufficient time has not yet elapsed to warrant conclusions as to its result. The third case cannot be considered, as the operation was not completed.

Other cases have been referred to him for operation, but they were considered unsuitable, either because they did not show sufficient symptoms of chronic nephritis to warrant an operation, or because they were too far advanced to offer fair chances for a trial of this procedure.

He concludes (1), that nephropexy is always a good procedure in a movable kidney in which chronic nephritis is present; (2) that nephrotomy has proved to be valuable in unilateral Bright's disease associated with hematuria and nephralgia, and (3) that complete bilateral decapsulation has not as yet been employed extensively enough to warrant any positive conclusion as to its value. Up to the time of writing, with the exception of Edebohls' two cases and the case here reported, no instances of decapsulation performed for the cure of chronic Bright's disease have been recorded.

The Heart in Diphtheria.

Chas. Bolton in the *Edinburg Medical Journal*, says there can be no doubt about the statement that "cardiac failure is one of the most important as well as the commonest of the toxic effects of diphtheria." A large percentage of patients have signs of cardiac failure at some period or other of the disease, and death during the acute toxic stage unless due to an accidental cause, as asphyxia, is invariably the result of primary cardiac failure. The fatal termination, usually takes place during the first fortnight of the disease, the onset of the signs being first noticed generally about the sixth day.

During convalescence its supervention is usually associated with the presence of some form of post-diphtheritic paralysis, and it may be secondary to or accelerated by some strain or shock. In this stage it is not so uniformly fatal as during the acute toxic period. It must, however, be remembered that sudden death from syncope may occur at any stage, though its supervention, when convalescence is established, is always referable to some strain.

In the non fatal cases of heart failure the evidence consists of irregularity or intermittence of the pulse, with or without the physical signs of dilatation of the heart; at the same time there is usually increased rapidity or slowing of the pulse. With regard to the pulse, he comes to the following conclusion:

(1) It alters considerably both in degree of irregularity and frequency during the 24 hours.

(2) These changes occur frequently, and often at very short intervals.

(3) On the whole the irregularity is most marked at night.

(4) As a rule, when the pulse becomes irregular, there is a diminution in its frequency, but this rule is by no means absolute.

(5) The irregularity coming on in the acute stage is a primary affection, but is, nevertheless, greatly affected by strain.

(6) The irregularity does not conform to any type.

(7) As a rule the patient appears quite well and suffers no inconvenience or distress on account of the heart failure.

Fibroma of the Nose.

W. Lincoln in the *American Journal of Medical Sciences*, gives an instance of this rare affection, with history, operative treatment and the result. It occurred in a male aged 18 years. There was a history of complete blockage of left nasal passage, frequent copious epistaxis from same side, and constant purulent discharge.

Patient was weak and emaciated, had broadened bridge, with frog-face, and pain over left side of face and head. On examination, a grayish tumor filled left nasal cavity from vestibule to posterior naris, pressing down the soft palate on that side, and interfering with speech and deglutition. No lymphatic swelling discoverable.

Attempts to remove the tumor by snare was successful, owing to the pressure of adhesions, while they occasioned severe hemorrhages. Microscopical examination of detached pieces showed the tumor to be pure fibroma; and external operation was decided upon.

An incision was made from near inner canthus of left eye, across bridge of nose to same point on right side; and thence directly down to right ala nasi. Next, pressing periosteum aside, the bones were cut through with Hey's saw, in the line of skin incision. The nose was also cut free from the upper lip, avoiding the gingivolabial fold of mucous membrane; and the septum divided in a line parallel to its anterior border, and connecting with the incision at the bridge. The whole nose was then turned over by strong forceps on to the left cheek, the hemorrhage being easily controlled by hemostatic forceps. By the use of a powerful electric headlight, an excellent view of the tumor was obtained.

After one or two ineffectual attempts at removal, a powerful wire snare was adjusted through the naris, and pressed into

position by finger in the naso-pharynx. The latter was then packed with a sponge, the wire gradually tightened, and the growth removed. The operation was completed by curetting the pedicle, and burning with the Paquelin cautery. The nostril was packed with iodoform gauze, and the nose sutured in position with silk sutures. Although the patient required frequent stimulation with hypodermic injections of strychnine, he made a good recovery. The first packing was removed after 24 hours, and the second after a like interval; after which the nose was left open, and simple sprays used.

Subsequent examinations after recovery were made every few months, but there had been no recurrence $5\frac{1}{2}$ years after operation. He concludes: "The interest in this case lies in the comparative rarity of the tumor in the nose, unaccompanied by similar growth in the naso-pharynx; and also in the satisfactory result secured by full exposure of the mass, and its thorough removal."

Intestinal Polyposis and Garcinoma.

J. Niemack (*Annals of Surgery*) reports a case of a girl of twelve years with obscure abdominal symptoms. Rectal examination revealed large numbers of polyps, ranging in size from a pea to a walnut, the pedicle of some of them being so much thinned that they fell off with hemorrhage. At three different times about one hundred polyps were removed with the galvanic snare. The dullness and resistance of the abdomen disappeared; it became flatter; but after having removed all the tumors as high up as twelve inches, the author realized that beyond his reach there was a great many more. About this time there could be felt spread through the whole abdomen what seemed to be enlarged mesenteric glands. The urine continued normal, the bowel movement dysenteric and foul smelling, frequently containing necrotic polyps. Every treatment utterly failed and she soon died from emaciation. Post-mortem examination showed general anæmia, flabby, pale heart, mesenteric glands slightly enlarged, the mucosa of colon and several inches of ileum were more or less beset with polyps. Some of them were little nodules of pea size just standing out from the mucosa, others had pedicles up to an inch in length. The largest one, of cauliflower shape, was in the ileum. The microscopical diagnosis was "adenoma papillosum." Several months later the father of the girl began to have rectal hemorrhages. The subsequent progress of his case led to a diagnosis of adenocarcinoma and a radical operation was done. The patient made

a good recovery. In reviewing the two cases he notes that the presence of other polyps near the carcinoma suggest strongly the malignant degeneration of primary simple papilloma. The latter disease was the daughter's fatal sickness. By the patient's first examination two years ago the fact was ascertained that the father became affected with rectal polyps after his daughter's death. These facts would suggest a possible infectiousness of intestinal polyposis, and the difference of the ages would account for the malignant character by "intensity" in the father by "extensiveness" in the girl.

Premature Infants.

Ballantyne (Brit. Med. Jour.) describes the conditions of the unborn child, and especially the child born shortly before term. The premature infant is a fetus without one of its most important organs, the placenta; it also lacks the liquor amnii and membranes, which together go to make up the fetal adnexa until the proper time for birth. Physiologically it is partly a fetus and partly a newborn child. We see fetal physiology trying to cope with neonatal conditions; the neonatal physiology hindered in its action by the persistent fetal conditions. First, the matter of temperature. The fetus is not required to manufacture heat in order to maintain its body temperature; the newborn infant is, and usually succeeds, but the premature infant is usually called upon to do so, and has only the tissue metabolism of fetal life slightly reinforced by that of an imperfectly established pulmonary respiration to aid him. His liver, moreover, which has been engaged in supplying the blood, is called upon to form bile, and to continue to form blood. The blood itself contains more nucleated xanthocytes than the full-term fetus and the jaundice of the newborn, which has been ascribed to breaking down of the xanthocytes, is very common in the prematurely born infant; and the most active area, the placental, is cut off and the heart is called upon to send a specially large supply to the lungs, which it cannot fully succeed in doing. There are also more exacting demands upon the new function of digestion. All the physiologic activity of the placenta, which has been in full play in its supplying chemical nutrition, is destroyed and its action of keeping out the invasion of toxins and bacilli is lost. The premature infant in its pathology is midway between the fetus and the newborn child, and the closure of the umbilical arteries and veins is apt to be incomplete, and offers an avenue for infection, and the ordinary routes of infection are also especially vulnerable. On the whole, he offers

less resistance to the pathogenic organisms than the full-grown fetus. In managing the prematurely born infant we must try to continue the fetal phase of life after birth occurs; hence, try to keep up animal heat by the incubator, aid the lungs as far as possible by some method of exciting respiration—in this, Ballantyne prefers the alternating flexion and extension of the trunk of the child as it lies in the palm of the obstetrician's hand, having been first carefully wrapped in cotton wool. Its food requires certain modifications. Human milk is lacking in iron, and he thinks it well to add iron to the food of the prematurely born child, and he has employed it in the form of liquor ferri peptonatus, though he cannot say as yet as to any pronounced results from his experiments. If human milk is not available the prognosis is much more serious. It is well to keep the child in the dark, as light may stimulate the eye muscles to act and lead to strabismus. With every care the child will often fail to survive. The problem of the premature infant, he says, is urgent.

Posture as a Cause of Uterine Displacement.

Tuttle, in the Yale Med. Jour. for June, 1902, considers that, although before the work of Marion Sims gynecologists had learned the usefulness of certain postures in the treatment of pelvic conditions, yet that so little is known to-day about the influence of posture in the production and maintenance of deformities and displacements of the uterus—an organ which is movable and helpless to resist the force of gravity and pressure of surrounding structures. With the body in equilibrium in the upright posture, the normal position of the pelvis has such a degree of obliquity as will place the weight of the abdominal viscera upon the arch of the symphysis and the lower abdominal wall. Fifty observers have stated the normal angle of obliquity to be from 20 deg. to 45 deg. If there is an abnormal lessening of the angle, the spinal column loses a portion of its anterior lumbar curve, the abdominal viscera drop backward, the power of contraction in the rectus abdominal muscle is lessened, and the intra-abdominal pressure is exerted downward and backward instead of forward upon the firm bridge of the pubic bone which normally supports it. The force of gravity, in such cases, strikes the fundus at a point back of the normal, tending to produce retrocession, and it will ultimately cause the conditions recognized as forward, backward or lateral flexion. The school girl, because of harmful positions, has the pelvis tilted backward, which reduces its angle of inclination; the

factory girl, seamstress, and the housewife, are subject to similar lesions caused by injurious postures. Some of the causes tending to faulty methods of standing and sitting are lax training of children, and the habit of standing or walking from the knees, causing the thighs to become flabby by disuse of the muscles which hold the pelvis at the proper angle, articles of dress which by their weight fatigue the legs, high-heeled shoes, which make it impossible to stand firmly, and the corset steel pressing upon the soft abdominal walls with a backward and downward force, and seats which are frequently such as to make it impossible to place the pelvis at a normal angle and at the same time use the back of the seat to support the shoulders. In its normal position the pelvis has no lateral angle of obliquity and any position which produces this lateral obliquity destroys the equilibrium of internal pressure and eventually will lead to malposition of the pelvic organs and the consequent evils. Indoor sedentary lives tend to habits of posture which have a more potent but rarely recognized influence in producing pelvic disease. Luxurious cushions and soft upholstery tempt the pelvis into positions unknown to our erect grandmothers. A combination of the two forms of obliquity in the habitual posture of the pelvis is quite common, especially when the habit has been acquired in standing. The influence of both can usually be traced in the shape and position of the uterus. For the prevention of these evils, parents and teachers should be instructed as to the proper position of the body and the dangers which are threatened by neglect. School and lecture room seats and chairs in general should be constructed to aid rather than to hinder efforts to maintain an equilibrium in a healthful position. Physicians should advise against high heels, corset steels and tight waist bands, and gynecologists should train patients into right habits of posture before undertaking local treatment.

Observations on Intubation of the Larynx.

Goodall in the Edinburgh Medical Journal, states that the following observations were based on a study of 101 cases treated at the Eastern Fever Hospital of the Metropolitan Asylums Board. In seven instances intubation followed tracheotomy, and in seven an attempt at intubation failed, so that there were eighty-seven cases of primary intubation. In forty-three intubation alone was needed for the relief of the symptoms, and of these nine died, or a percentage mortality 20.9. In forty-four cases intubation was followed by tracheotomy, and of these fifteen proved fatal, giving a mor-

tality of 34 per cent. Most of the patients were suffering from laryngeal diphtheria, but in thirteen instances the respiratory obstruction was due to other causes. Contrary to what one might have expected, the cases of laryngeal diphtheria proved the more amenable to treatment by intubation. Of the eighty-one diphtheria cases forty came to tracheotomy, or 51.2 per cent., while of the twelve other cases ten, or 83.3 per cent., were subsequently tracheotomized.

As regards the class of case which is suitable for intubation, he regards the operation as inexpedient in toxic cases in which there is little or no hope of the patient's recovery. Patients with very abundant faucial membrane need not necessarily be excluded from the benefits of intubation, provided there is no œdema of the fauces to obstruct the upper opening of the tube *in situ*. Extension of membrane below the larynx is not necessarily a bar to intubation; tracheal casts can be coughed up through the tube. After insertion it is in most instances advisable to leave the tube in the larynx for about thirty-six to sixty hours, but it should not be inserted more than three times.

Every case in this series that was intubated four or more times came to tracheotomy. Frequent expulsion of the tube by coughing soon after its insertion is also an indication for tracheotomy. Blackening of the tube is seen in some cases, but it does not seem to have any special significance. There are some objections which have been raised against intubation as contrasted with tracheotomy which it is well to consider.

1. The danger of sudden blocking of the tube while in the larynx by membrane or thick mucus. This did occur in seven instances, but in only three of them was it necessary to have immediate recourse to tracheotomy. An intelligent nurse can be taught to express the tube, and in hospital practice there appears to be time for a medical officer to reach the patient and perform tracheotomy if necessary.

2. The risk of causing ulceration of the larynx. This occurred in four instances. One must be careful not to intubate when the larynx is much swollen, or to persist too much in one's attempts where difficulty is experienced in introducing the tube. Lastly, do not intubate the same case more than three times. If these rules are followed, Dr. Goodall believes that ulceration of the larynx will be seen no more often after intubation than after tracheotomy.

3. The danger of increasing the dyspœa by pushing false membrane before the tube. This may certainly occur, and intubation should never be attempted without all the

apparatus for tracheotomy being ready at hand.

4. The tube may be coughed up, and the dyspnoea return. This is quite true, but dyspnoea by no means always returns at once. When it does, there is ample time for the medical officer to reach the patient, and either reinsert the tube or perform tracheotomy.

5. That intubation is more difficult to perform than tracheotomy. This objection has not been borne out in Dr. Goodall's experience.

6. That the patient is prevented from taking sufficient nourishment. It is true that the patient cannot take food in the ordinary way without danger of its getting into the larynx, but ample nourishment can be given either by a tube passed through the nose into the stomach or by rectal feeding.

Care was taken throughout not to intubate any case that would not otherwise have been submitted to tracheotomy. All the cases were treated with antitoxin, without which results so successful would not have been obtained.

Common Skin Diseases.

Bulkley, in the Virginia Semi-Monthly, finds that out of 20,000 cases of miscellaneous skin diseases and of 120 different species, five diseases formed no less than 69 per cent. of the whole. These are: eczema, 32.01; acne, 21.96; syphilis, 6.58 (in public practice, 17.53 per cent); alopecia, 4.67, and psoriasis, 3.82 per cent; total, 69.04 per cent. If one masters well the diagnosis and treatment of these five diseases he is able to treat three-fourths of the cases that come to hand. As regards the treatment of eczema, the only thing is to use one's intelligence in the individual treatment. It is always a disease of debility accompanied by faulty assimilation and disassimilation. The writer thinks the liver is often at fault. Urinary examination will reveal it not in the form of albumin or sugar but in other abnormalities. The parasitic nature he considers as exceedingly dubious, and not admitted by those who know most about the disease. The so-called seborrheic dermatitis of Unna, or dermatitis seborrheica, does often seem to have a parasitic element, but if this has really any relation to eczema, which many question, its causative parasite has not been sufficiently demonstrated. It is not known to be actively contagious. We must remember that many germs get into the lesions secondarily and are not the cause. The next most common eruption is acne in its various varieties, and here we must also study the individual as much as the local

lesions. There is no specific for it any more than for eczema. Bulkley discredits the connection between acne and sexual disorders. It is true that it commonly develops at the time of puberty and is aggravated by menstruation, but there are other causes. Bulkley has rarely seen it influenced for good by any local treatment directed against the sexual disturbance. It also is a disease of faulty assimilation and disassimilation and this should be kept in mind. Syphilis is the next most frequent condition, which he thinks is more common than is generally supposed. It is not a venereal disease in all cases and the absence of any history of exposure should never throw one off his guard as to its existence. It is very difficult to get the history. The poison of syphilis may find entrance at any vulnerable point, and the importance of its specific treatment can not be too much emphasized. Alopecia is apparently a small matter, but we neglect it too much and turn it over to quacks. It frequently may be due to syphilis and there is a great deal of harm done by the advertisements of hair restorers. It is impossible to give an outline of the treatment for it; local stimulants may sometimes be necessary, but should be associated with constitutional treatment. The author mentions psoriasis, which he thinks is sometimes curable. The patient may seem to be in perfect health, and it is hard to say what constitutional treatment to advise. Some cases of psoriasis are found in the strumous states, the great majority are arthritic in nature and the gouty or rheumatic diathesis must always be looked after. He believes there is also a general debility or lowered vitality in this condition as in others.

Phthisis.

Bramwell, in the London Medical Lancet July 19, 1902, discusses the precautions which the individual should take in order to protect himself, especially if there is any predisposition. These should date from infancy and childhood, during which the best hygienic measures should be adopted, and the condition of the respiratory apparatus be carefully watched and guarded during youth and adult life. The patient should be well fed, well nourished and well clothed, live in healthy surroundings, avoid excesses, or occupations such as are apt to produce lung trouble, pay special attention to the condition of the digestive functions and increase vital resistance in every possible way. Of course, these can only be fully carried out by those who are well to do, but they should be followed as far as possible by the poor as well as the rich. Healthy persons living in close contact with

tuberculous patients should be scrupulously careful to prevent the introduction of the bacilli into their systems. The phthisical patients should be instructed to avoid kissing and not to swallow their own sputum. Their rooms should be scrupulously clean and they should sleep alone. If a phthisical patient should cough into the face of a healthy person, the latter should immediately blow the nose so as to clean out the nostrils, and rinse out the mouth and throat with some disinfecting solution. The enormous decrease in the mortality from better housing and nutrition of the public during the last fifty years, shows their value, and with specially preventive measures are mentioned the sanitary regulation of work-shops, the prohibition of expectoration, etc. The importance of early diagnosis, and treatment is also emphasized. Means of testing and reporting on suspected sputum or milk should be provided at public expense, as also should sanitariums for the benefit of incipient cases and hospital accommodations for the use of patients in the more advanced stages. Public conveyances should be looked after. The phthisical should be prevented from spitting in public places and measures should be taken for the destruction of sputum. He believes compulsory notification is essential if effort is made to reduce the disease to its lowest limits. Lastly, the writer mentions measures which the authorities should take to prevent the tubercle bacilli and its spores being conveyed from the lower animals, especially cattle, to man.

A Case of Fatal Hereditary Edema.

Griffith (Brit. Med. Jour., June 14, 1902,) gives the history of a girl who had been under observation for sixteen years, finally died from laryngeal edema. The history was as follows: The girl's father has suffered from swellings of the body ever since infancy. Twice it affected the larynx and the third time at the age of twenty-nine he suddenly died during the third attack. Shortly after the girl's birth, the right arm suddenly became so swollen that the sleeve had to be cut away in order to remove it. The swellings were usually pale, diffuse or circumscribed, did not pit on pressure and never became vesicular or bulbous. For sixteen years she was under the author's care and although the larynx was occasionally affected no serious danger or difficulty was experienced. One day, while spinning a top for her child she suddenly dropped it, rose, clutched her throat and dropped dead. Thus so sudden was the last attack. She had a few hours before complained of some throat swelling, but it had not seemed to amount to much. Autopsy showed that

the walls of the larynx came together just below its superior aperture and continued juxtaposed until just below the level of the true cords. The edematous fluid was pure serum and, contrary to conditions usually found, the tissue covering the true vocal cords was decidedly affected. There are many things of more than passing interest bearing on these cases. Angioneurotic edema has been traced through five generations, no less than 22 members having been affected. It has been called "wandering edema," "massive" or "giant urticaria" and various other names which strongly suggest that their authors were agreed in a measure that it was of neurotic origin. Two hundred and thirty years ago Ranvier ligated the femoral vein of a dog and noted that there was no swelling until after section of the sciatic. Gowers notes the association of trigeminal neuralgia with venous distention on the same side and edema of the scalp. Charcot observed the association of swelling with hysterical palsy, the swelling passing away with the cessation of the palsy. In alcoholic paralysis dermatographia, which is a traumatic urticaria akin to, if not identical with, the edemas under discussion, is perhaps more marked on occasions than in any other condition. There is still much study needed ere one can understand the various forms of swellings; the purely mechanical, the toxic and the trophic are so interwoven in their relationship as to be extremely difficult of disentanglement.

Ectopic Pregnancy.

Briggs in the Occidental Medical Times reports several cases of tubal pregnancy and states that the ratio of this condition to normal pregnancy in his work has been about 1 to 250. In a large number, even a majority of cases, he thinks it is overlooked, but by careful examination it can be recognized before rupture and generally after rupture or abortion. The classical symptoms-complex of tubal abortion and tubal rupture is entirely inadequate. The questions which arise are: 1. Does pregnancy exist? 2. If so, is it uterine or tubal? 3. If the pregnancy be tubal, is the tube still in tact or abortion in progress or completed? Has rupture taken place? If so, is it extraperitoneal or intraperitoneal? The diagnosis of tubal pregnancy before rupture or abortion is based on: 1. The usual evidence of pregnancy, plus irregular uterine hemorrhages from the fifth week onward, the passage of decidua without fetus, tubal colic, the existence of an elastic, rapidly-enlarging tube corresponding in size with presumed period of pregnancy, and with the absence of that tubal inflam-

mation. Tubal abortion is to be diagnosed with more or less probability if, in the course of tubal pregnancy, a rupture and sudden increase of the pelvic tumor is coincident with the recurrent pelvic colic. A completed abortion may be inferred from a gradual diminution of the tumor following permanent cessation of the colic. The diagnosis of ruptured tubal pregnancy is based on evidence of tubal pregnancy, sudden, severe, even excruciating pelvic pain radiating into the abdomen, tenderness low down over the abdomen, due to peritoneal irritation, rather than peritoneal inflammation. If hemorrhage be rapid and profuse the symptoms of acute anemia, if slow and moderate, the evidence of a hematocoele, and lastly, shock in proportion to sensitiveness of nervous system, severity of pain and loss of blood. The differential diagnosis between intra- and extra-peritoneal rupture is difficult and uncertain. The rapid formation of a dense circumscribed tumor, presumably in the broad ligament of the side corresponding with the pregnant tube, coincidentally with the evidence of rupture, would naturally excite suspicion, but does not warrant a positive diagnosis.

Malaria and Filariasis in Barbados.

Geo. C. Low (Brit. Med. Jour., June 14, 1902) states that malaria in Barbados is unknown, while filariasis exists to an inordinate and dangerous degree. It is more than significant that nowhere on the island are the *Anopheles* to be found, while *Culex fatigans*, one of the most frequent hosts of filaria nocturna, abounds. Just why there are no *Anopheles*; whether they were once imported and subsequently became extinct or whether they never reached Barbados is not known. All the neighboring islands are pestilential with malaria and in each *Anopheles* are found in abundance. The inordinate frequency of elephantiasis and the kindred manifestations of filarial infection is in direct proportion to the infection of the *Culex fatigans*; out of 100 taken for examination from the wards and corridors of the general hospital 23 contained the embryos. On analyzing a table which resulted from the examination of 600 patients in this hospital and in other institutions the very interesting fact is established that of the 13-per-cent. of patients found to be infected, in no less than 8-per-cent, there were absolutely no symptoms. In discussing the question of limiting filariasis, the author states that considering the fact that *Culex fatigans* is to a larger extent domestic and breeds in much smaller areas than *Anopheles*, a great deal can be done by improving the drainage and in protecting from mosquito infection such tanks

and cisterns as must remain full of water. The only way to accomplish this is to have the matter over-seen by competent men, because in Barbados nothing in the way of coöperation can be expected from the natives.

Tabes Dorsalis.

Taylor (Brit. Med. Jour., July 19, 1902,) calls attention to some anomalous types of tabes, which he divides into two classes: 1. Those in which symptoms referable to the eye are the chief manifestations of disease. 2. Those characterized by obtrusiveness of various unusual conditions such as gastric crises, joint troubles, perforating ulcer or other tropic changes. Of the first class many are seen in the early stage by ophthalmic surgeons, and in this way he has had opportunity to observe a number. The most common types have either paralysis of some ocular muscle or some optic atrophy. The muscle most frequently affected is the levator palpebrarum and other muscles supplied by the third nerve may be also slightly involved. Unilateral ptosis alone is rare, though a slight definite degree of double ptosis is not uncommon as a symptom. The sixth nerve may also be affected on one side. These palsies are generally of a transient character, clearing up in a few weeks usually under the influence of iodid or mercury. The question whether these cases are truly tabes is noticed, but he believes they are, as he has seen further developments in a number of cases. The defective vision thus complained of is almost invariably the result of the optic atrophy frequently met with in tabes. No other symptom, not even loss of knee-jerk, may be found, though a few months later the other symptoms of tabes are likely to appear. Still another class is that in which the Argyll-Robertson pupil is the sole sign of really definite importance in the beginning. It is not infrequently said that the appearance of optic atrophy is coincident with the arrest of the progress of the disease, but this statement should be accepted with a certain amount of reserve. A second class of anomalies are those characterized by gastric crises or joint troubles or other trophic disturbances. Many of them have definite lightning pains, pupillary changes, etc., but they may be absent, and others which are called bilious attacks appear. We should not be content with the diagnosis of "bilious attack," but suspect or look for a nervous disease. In another class of cases the larynx is affected. These crises are really choking attacks with severe inspiratory spasm. Tracheotomy may be necessary. There may be some ocular muscular troubles and other bulbar

symptoms. The writer believes in specific remedies in the ocular cases as they might be of value, but when optic atrophy occurs with tabetic disease it is a bad symptom, and almost invariably goes on to complete atrophy and blindness. A number of cases are reported.

The Blood in Appendicitis.

J. C. Da Costa, Jr., (*American Journal of the Medical Sciences*) says that the average case of appendicitis before operation shows a loss of about thirty per cent. of hemoglobin, and of more than half a million erythrocytes per cubic millimeter. Occasionally the anemia is of a grade so high that it appears to constitute in itself a serious complication, and to raise a doubt as to the safety of surgical interference should the latter otherwise be indicated. Doubts on this score, however, have not been justified by the records of the cases included in this series. (2) Moderate leucocytosis may occur both in the absence and in the presence of an abscess and its consequences. It accompanies about thirty-five per cent. of non-purulent and ninety per cent. of purulent cases. (3) Leucocyte counts ranging between 10,000 and 15,000 or 17,000 cannot be depended upon to reflect the nature of the local lesion, since the degree of increase may be found both in catarrhal and purulent cases. Counts of 20,000 or more almost invariably indicate the presence of pus, gangrene, or general peritonitis, one or all. (4) Leucocytosis may be absent both in trivial, catarrhal, and in fulminant cases, as well as in forms of circumscribed abscess. (5) In operative cases, thorough evacuation of the abscess is followed within a few days by decline to normal in the number of leucocytes provided that the recovery of the patient is uneventful. Persistence of the leucocytes after the third or fourth day following the operation may usually be attributed either to undrained pus pockets, to general peritonitis, or to both of these factors. In a patient unmistakably septic absence or leucocytosis should be interpreted as a sign of intense infection, the prognosis of which is more likely grave than favorable. A high leucocytosis in such instances does not necessarily indicate a favorable prognosis, but simply represents an intense affection coupled with normally active resisting powers on the part of the patient. Absence of leucocytosis in a patient with mild, indefinite symptoms is a clinical sign of no tangible value, in so far as it may serve in detecting the presence of pus; since a large abscess, if thoroughly circumscribed, may exist without causing the slightest increase in the number of leucocytes.

He emphasizes the importance of not being led into the diagnosis of appendicitis in the presence of these blood changes alone, as other conditions—such as ovarian abscess, hepatic abscess, empyema of the gall-bladder, and malignant disease of cæcum—have all been known to give difficulty in diagnosis from appendicitis, and in each of these examination of the blood may show similar conditions. The non-occurrence of leucocytes in typhoid fever is, however, of assistance.

The Powers of Natural Resistance or the Personal Factor in Disease of Microbic Origin.

McKenzie, in *London Lancet*, May 31, 1902, points out that influenza is a striking example of pandemic disease occurring at irregular and long intervals which attacks all classes and ages and is not generally a serious malady unless occurring in the aged, in those suffering from pulmonary and cardiac disease and in those devitalized from any cause. The author thinks that the powers of natural resistance play a most important part in tuberculosis and contends that too little consideration has been given to the human host in which the specific germs find lodgement. He argues that the powers of personal resistance are well demonstrated by the fact that only a limited number of those exposed to tuberculosis infection fall prey to it. The writer further claims that tubercle bacilli may not only invade the respiratory and digestive organs, but may find their way by the blood into practically all parts of the body where, only under suitable conditions, they set up the tuberculous process. The personal factor of resistance is strongly emphasized by post mortem experience which has shown that tuberculous lesions are found in the lungs and other parts of the body of individuals dying from diseases other than tuberculosis. It has been estimated by writers that such nonactive tuberculous lesions are found in from 30 to 90 per cent. of all dead individuals. The differences in the powers of natural resistance are also shown by the frequency with which many inherit and some acquire a tendency towards tuberculosis. The intemperate, or those who have opportunities for drinking, show a higher mortality from tuberculosis than do others. Measles and whooping cough are often complicated with bronchopneumonia. They reduce the vital resistance powers and open the door to tuberculosis. A point upon which he lays considerable stress is that during the last 50 years, not only in England, but in other countries, the mortality from consumption has greatly diminished and he thinks that this striking

decrease in mortality from consumption, which has gone on before measures were taken to disinfect sputum and separate the sick from the healthy, can be traced to improved sanitation, to better draining of the land, to the improved disposal of the sewage, to the better housing, clothing and feeding of the general population. He refers to rheumatic fever and points out that, while the bacterial origin of this disease is not absolutely admitted at the present time, it appears to be within almost immediate realization. McKenzie states that the various theories which have been advanced to explain the cause, and he discusses at some length the organism described by Poynton and Paine. He says that if the bacterial nature of rheumatic fever were fully established, we would still have to take account of the soil no less than of the seed as in tuberculosis, and that the personal factor will remain as important in the future as it has been in the past. He refers to appendicitis or perityphlitis as an excellent illustration of the importance of natural powers of resistance in the occurrence of disease. The author states, we must never forget that the soil is of as great importance to study as is the seed in the proper understanding and treatment of diseases of microbic origin.

The Renal Complications of the Acute Diarrheas.

More (Medical News, June 7, 1902) concludes an article with the following facts: Acute and degenerative changes may occur in the kidneys in the acute enteric diseases of infancy, as in other acute infectious and febrile diseases. There is nothing characteristic about these changes. In rare instances proliferative and intestinal changes may develop. The etiology of these conditions is a complex one, including not only micro organisms and their toxic products, but also the products, and intestinal fermentation and alimentary poisons. The urine shows the changes usually found with such pathological conditions in the kidneys. It is doubtful if these complications cause any symptoms distinguishable from those due to toxemia. Restlessness, persistent vomiting, unexplainable dyspnea, edema and myosis have, however, been attributed to them and considered characteristic. It is probably that *per se*, except in rare instances, they are of little or no prognostic importance. They are to be regarded rather merely as an index of the degree of toxemia. Recovery from these lesions is usually complete. It is possible, however, in rare instances that they may lead to chronic nephritis in later years. Pyelitis, pyelonephritis and cystitis may

also develop as complications. They are usually of a mild type. Their symptoms are generally masked by those of the primary disease. They affect the prognosis but little. The treatment of these renal complications is that of such conditions in general.

Aneurysm.

Osler (Journal of the American Medical Association, June 7, 1902) discussed this condition under the following four headings: (1) Arteriovenous aneurysm of the subclavian vessels; (2) the humming-top murmur in thoracic aneurysm; (3) on the value of the fluoroscope in the diagnosis of obscure cases of thoracic aneurysm; (4) on the importance of careful inspection of the chest in thoracic aneurysm. He details the history of Edward S., aged 29 years, of Kentucky, who came under his observation on April 19, 1900. The patient was shot four times on January 5, 1900. One of the bullets entered the left shoulder and still remains imbedded in the upper portion of the scapula, but gives no trouble. The second penetrated the middle of the back of the left arm and passed inward and upward to the inner side of the condyle of the humerus, then its course deflected across the bend of the elbow and down the forearm, making its exit about the upper third. The third bullet apparently did not penetrate the anterior wall of the chest and entered the tissues of the left side posterior to the midaxillary line entered the middle of the fold of the left trapezius, passed inward and upward in front of the spine and made its exit just under the right clavicle. On examination, a pulsating swelling was found just about the right clavicle. A marked thrill was felt over the pulsating mass. On auscultation, a humming-top murmur, with marked systolic intensification, was audible over the pulsating mass, with less loudness over the heart. The patient is conscious of pulsation in the left ear, but not in the right. Over the neck and over the axillary and brachial arteries a systolic murmur can be heard, while the distole over these points is occupied by a whizzing murmur. The right radial pulse is feeble than the left. The pulsations in the temporal arteries present no differences. The writer concludes that the subclavian artery and vein were wounded by the bullet causing an arteriovenous aneurysm. Osler thinks that the humming-top murmur is almost pathognomonic of abnormal communication between the chambers of the heart and the greater vessels at the root of the neck, or of an aneurysm of the aorta with the vena cava or a pulmonary artery. The author has recognized it in congenita

heart disease, with persistence of ductus arteriosus, cases of imperfection of the ventricular septum, and in two cases, in one of which there was an aneurysm of the arch of the aorta communicating with the right pulmonary artery, and in the other, a continuous humming murmur was audible over the manubrium and aortic regions. He thinks the fluoroscope is of value in the diagnosis of obscure cases of thoracic aneurysm, particularly in cases with symptoms and no physical signs. He lays great stress on the importance of careful inspection of the chest in the diagnosis of thoracic aneurysm, routine examination, a large chest, a good light and good eyes are the essentials.

Anaesthesia in the Extraction of Teeth.

According to treatment, London, Caumartin recommends local anaesthesia in the great majority of cases, and gives minute directions for its induction. If freezing by ethyl chloride be chosen, tubes with curved ends allow of more accurate application to the inner aspect and to the lower teeth. The gums must be dried, and kept quite dry. Both sides of the gum to the full depth of the roots must be frozen. Ethyl chloride gives the best results in extraction of milk and front teeth. It is of little good in cases of periostitis.

Cocaine is the anaesthetic of choice, but to insure the fullest advantage certain rules must be followed. In the adult all teeth may be extracted under it, but most complete success is attained with dead roots which have lost their nervous attachments. Cocaine must not be used if there be acute alveolo-dental periostitis, for it has a bad effect on inflamed tissues. It is only partly successful in extraction of wisdom teeth, especially the lower, because the liquid easily spreads in the neighboring cellular tissue. Cardiac lesions, and great excitability, are contra-indications. Cocaine is not to be used in children. A good syringe is absolutely necessary; those usual for subcutaneous injections are of little use. There should be two rests on the barrel for the index and middle fingers, to serve as *points d'appui*, for much force is needed to inject the liquid, especially into the palatine mucous membrane. The needle should be screwed on to the body of the syringe, so that it may not fall into the mouth; it should be narrow to avoid pain and to allow of progressive injection. Use a 1 per cent. solution freshly prepared. The patient must not be fasting, his last meal having been three or four hours before, and he should take a cup of coffee just before operation. The horizontal posture is the best though not always practicable. To render the prick less painful a little ethyl chloride

may be sprayed on, or the gum strongly compressed at the proposed puncture-point. Then sterilize the needle in a flame, and introduce it at first on the outside parallel to the root, being careful not to touch the periosteum, and inject; the gum becomes white. Make one or two other injections near to the first so as to almost surround the tooth. In a minute repeat the manoeuvre on the inner side of the tooth, then look carefully at your patient. If there is to be any malaise you will now perceive it.

One c. c. of solution will have been used—i. e., 1 centigramme of cocaine—a dose enough for the extraction of a tooth or several neighboring roots. The injection will have lasted two or three minutes. Wait still for three minutes, then tell the patient that he will feel the penetration of the forceps, and the effort of extraction, but that there will be no pain. If the injection has been carefully done there will be really no pain. Accidents by this method will be very rare. If the patient becomes pale, lay him down at once, reassure him, and make him breathe amyl nitrite. A total dose of 2 centigrammes must never be passed at one sitting. It is well to habitually use ethyl chloride and cocaine, although eucaine gives as good results as cocaine. Nirvanine and guaiacol involves less danger of intoxication, but the latter may cause sloughing of the gum, and in every case there persists at the point of injection an induration which may be painful for some time.

General anaesthesia should only be used for patients in good condition and free from any organic lesion, and then (1) when there are many extractions needed, or the patient is faint-hearted and objects to several sittings; (2) when there is great difficulty of extraction, as in case of contraction of the jaw, or in extraction of wisdom teeth; (3) when there is acute alveolo-dental periostitis, or perimaxillary phlegmon, necessitating, besides the extraction of one or more teeth, incision of an abscess.

Of all the agents used for general anaesthesia the best is that with which one is most familiar.

Treatment of Urethral Stricture by Electrolysis.

R. Newman, in the Journal of Advanced Therapeutics, states that during the past thirty years he has treated by electrolysis no fewer than 2,000 cases of urethral stricture, with results which lead him to consider it as the method to be adopted par excellence. The writer's own experience is further supported by records of at least 1,500 cases in the practice of others. The armamentarium needed is as follows: A

good battery, the cells of which can be taken up one by one without any breaks in the circuit; a milliamperemeter; suitable electrodes. A correct and exact diagnosis is of first importance. None but organic strictures are suitable, and there should not be other disease of the bladder, prostate, or urethra. Any acute disease—*inflammation, haemorrhage, or discharge*—is a contraindication to electrolysis. In treating any particular case, the author first carefully explores the urethra to ascertain the exact size and situation of the trouble. The writer then selects an electrode about two numbers (French) larger than the stricture, and having seen that the battery is at zero, connects the positive pole with an indifferent electrode conveniently fixed to the patient, the negative pole being attached to the electrode bougie, which is then carefully passed down to the beginning of the stricture. The current is then gradually turned on, avoiding any production of pain in the patient; about 5 milliamperes are usually borne without any discomfort, and this strength should seldom be exceeded, the end of the electrode being gently pressed against the stricture, so as to follow the line of the urethra. In from five to fifteen minutes the electrode will have passed completely through the stricture, and may be passed on into the bladder. It should then be gently withdrawn, the current collector being gently returned to zero as soon as the end of the electrode has repassed the stricture. The patient will probably feel immediate relief, and the operation need not in any way interfere with his ordinary avocations. The *seances* should be repeated at intervals of about a week until a full-sized electrode can be passed without the least force or discomfort. In the author's experience the treatment causes no pain or inconvenience, is devoid of danger, whether from haemorrhage, fever or other unpleasant complications. It relieves at once, without necessitating any irksome restraint of the patient, and, most important of all, no relapse takes place. Any failures can be traced to either (1) the operator himself, (2) a wrong diagnosis, (3) faulty instruments, (4) meddlesome interference with the patient. It only needs a clear head, steady hand, sensitive fingers, patience, and a small amount of skill and practice in genito-urinary practice.

Scarlet Fever.

W. W. Robertson (Pediatrics) says that until the eruption makes its appearance the disease cannot spread. The communication is probably effected by the respiratory tract, or possibly through the alimentary canal. It has been conveyed by milk.

There is no characteristic morbid anatomy, the eruption, unless hemorrhagic, fading after death. The eruption makes the patient look like a boiled lobster and disappears on pressure to return promptly when the pressure is removed. At times the eruption is patchy. When severe it itches or burns. The mouth, except the tongue, is bright red; after a few days the tongue desquamates and appears bright red also. The duration of simple, uncomplicated scarlet fever ranges from three to fourteen days. In the variety called "anginose" the throat symptoms are severe and there may be a false membrane; indeed, the throat may present all the features of a severe diphtheria. The ear is almost certainly involved. In the "malignant" variety there is great prostration, cyanosis and delirium. In the "hemorrhagic" form there are more or less extensive hemorrhagic extravasations, epistaxis and hematuria. The treatment is liquid diet, with good nursing, cool sponging or the cold pack if the fever be high, and inunction with cold cream or sweet oil to allay the skin irritation. If the throat require attention it may be sprayed with peroxide (1 to 3), bichloride (1 to 5,000) or carbolic (1 to 50). Cold water or ice externally gives comfort. An efficient throat bandage has pockets opposite the tonsils, and in these, pieces of ice are placed, or india rubber bags may be used. Paracentesis should be practiced early if the middle ear be involved.

The Bacteriology of Eczema.

Whitfield, in the British Journal of Dermatology, has pursued special researches into the bacteriology of dry eczema, dry seborrhea, etc., of the face in children. Clinically the eruptions studied are characterized by small, well-defined discs of varying size, seated chiefly upon the cheeks, chin and neck, with a special predilection for the skin about the mouth. In the latter locality the horny layer becomes fissured by the movements of the skin, and the scales which form are firmly adherent. The patches on the face show no tendency to symmetry of arrangement. While there may be extension at their periphery there is no tendency to heal in the center. Although several cases may be seen in one family we have no evidence that this form of eruption is contagious. On the other hand it is certainly seen more commonly after cold winds than at other times.

A patch of eruption was curetted and bouillon cultures obtained from the scrapings. A coccus was recovered in specimens from every individual examined, which grew freely upon gelatin without

liquefaction. This germ was non-pathogenic to guinea-pigs and was unable to produce any eruption when inoculated into the human arm. Nevertheless the author believes it to be a form of staphylococcus, and, further, identical with the germ claimed by Merrill as the cause of seborehric eczema. This micro-organism was the only one constantly present in these cases.

A Remedy Proposed [for the Evil of Substitution.]

Williams, in the Medical Compound, thinks that the requirement of a license to all druggists who dispense drugs or medicines, revokable upon the licensee's being convicted of substituting any ingredient, drug or medicine other than, and in lieu or instead of, that specified in the prescription, order or request in writing, of any physician, would go a long way to aid in the matter of honestly filling prescriptions. Let the medical societies induce their respective State Legislatures to enact a law requiring such a license, with a simple and practical procedure for establishing the guilt and enforcing the penalty against infraction, and the practice of substitution would soon cease. Let proceedings for revocation of license be before the court, board, or officer, empowered to issue the license, and be set in motion at the relation of either the board of health, a local medical society, or the purchaser upon whom the fraud and imposition had been done, or of the physician by whom the prescription or order was issued or given, or of any person, firm or corporation for whose brand or make of drug or medicine the substitution had been perpetrated. Let the licensing board, court, or officer be empowered to issue citations, subpoenas for witnesses, to administer oaths, and be given all other requisite powers for duty trying the issues and revoking the license of the guilty.

Ophthalmia Neonatorum.

Treacher Collins (The London Practitioner) shows clearly the advances that have been made in the prevention of the disease by the general adoption of some method of disinfection at birth, either that of Cr  d   or some slight modification, at the principal lying-in hospitals in the United Kingdoms, and concludes that either a solution of corrosive sublimate 0.1 per cent., or silver nitrate 2 per cent. should be used. Under some such method the percentage of ophthalmia neonatorum has been reduced from about 10 per cent. to something under 0.5 per cent. The time of infection, as shown by the date of development of the disease, is most commonly at birth, or

more probably immediately after, at the first bath. Even if the disease occur, it is a much less serious affection than gonorrh  al ophthalmia of the adult, and if treated from the early stages very few eyes should be lost. Adoption of efficient treatment will reduce the number of blind by as much as 30 per cent. It is most unfortunate that no action was found possible by the Local Government Board to aid in the prevention of the disease before 1897. Private enterprise has to some extent filled the want. The Obstetrical Society of London has inserted rules for the disinfection of the infants' eyes in the regulations to be observed by the holders of their certificates, and other bodies have made special efforts. On the Continent and in America more has been done. In some countries it is a punishable offense for a midwife to neglect to summon a medical man to any case of ophthalmia neonatorum. The methods already adopted in England have resulted in great gain to the community by the diminution of the blind, but much more might be done. It would greatly aid if some such law as is already current in the United States were passed here, to enforce the notification to a medical man by a midwife of any case of ophthalmia neonatorum occurring in her practice, under penalty of fine or imprisonment in case of neglect.

Retrodeviations in Nulliparae and Virgins.

Hayd, in the American Journal of Obstetrics, points out that the general opinion that backward displacements are special to married women and multiparae is erroneous, and that they are met with in multiparae, and even in young girls, much oftener than has been supposed. Among the last fifty Alexander operations performed by him, eleven were upon women who had never borne a child, and nine on young girls, of whom one was only fifteen years old. In these patients the retroflexion, with its train of nervous and painful symptoms, had generally existed from puberty, and in many the uterus was more or less infantile; on the other hand, the round ligaments showed no atrophy save in such as had been suffering for many years; in young girls they were rather more prominent than in multiparae. Many such patients, in default of a gynecological examination, are liable to remain sterile, or to lead a miserable existence, while surgical intervention, consisting in dilatation of the cervical canal, curettage, and Alexander's operation, when opportunely performed, is most beneficial. Pessaries are useless, as the displacement is fixed, and often associated with genital hyperesthesia.

Leucocytosis in Scarlet Fever.

J. M. Bowie (*Journal of Pathology and Bacteriology*) says that practically all cases of scarlet fever show leucocytosis, which begins in the period of incubation shortly after infection and reaches its maximum at or shortly after the height of severity of the disease, and then gradually sinks to normal. In ordinary simple uncomplicated cases, the maximum leucocytosis is reached in the first week and the normal generally during the first three weeks. The more severe the case, the higher is the leucocytosis and the longer it lasts. A favorable case in any one variety of the disease has a higher leucocytosis than an unfavorable case of the same variety. The fever has no direct effect on the leucocytosis. The polymorphonuclear leucocytes are increased relatively and absolutely at first and then fall to the normal, the lymphocytes acting inversely; this cycle of events occurs in simple cases within three weeks. Eosinophiles diminish at the onset of the fever, increase rapidly in simple cases until the height of the disease is past, then diminish and finally reach the normal some time after the sum total leucocytosis has disappeared—in short, when the poison has been eliminated. The more severe the case, the longer are the eosinophiles subnormal before they rise again; in fatal cases they never rise, but sink rapidly toward zero and remain there. The leucocytes in complications go through a cycle of events similar in all respects to that of the primary fever. From the standpoint of diagnosis the leucocyte count gives no information, for most of the febrile affections with which scarlatina is likely to be confounded have a leucocytosis of their own. Measles which has no leucocytosis is rarely confounded with scarlatina. On the other hand, the differential count is of value, for scarlatina is one of the few acute infectious diseases in which one finds an increase in the eosinophiles early in the disease, which persists for some time. Thus tonsillitis and septic conditions should be readily distinguished from slight cases of scarlatina by a long-continued eosinophilia of the latter, and it is precisely in the differential diagnosis of such cases that the difficulty lies. From the standpoint of prognosis, leucocytosis is of practical value. In simple cases, if severe, and if the leucocytosis be high and rising, one may predict a favorable course; if the leucocytosis be low and stationary one may expect a tedious case. If, after the crisis in the temperature, the leucocytes steadily diminish, the case is doing well. If they stop in their return to the normal, or rise again, one may expect some complication, and, as

nephritis is the one mostly to be feared, one may take the proper measures accordingly. In the anginose kind, with a high and rising leucocytosis, one may predict a happy ending. If low and sinking, while the objective symptoms are becoming aggravated, a fatal issue is to be expected. In the differential count, if the eosinophiles show a relative increase, the augury is good; if normal or if it sink after the first day or two, the case in all probability is a severe one. As long as the relative increase of eosinophiles is present, one cannot be sure that some complications will not ensue, whereas if the eosinophiles have come down to the normal in the usual way, one should be free from anxiety.

Intestinal Sand.

D. Duckworth, A. E. Garrod in the *London Lancet*, have defined a true and false variety of sand in the intestinal canal. The false is composed of remains of vegetable foods resistant to the digestive fluids, perhaps a little incrustated with earthly salts. Pears, which often contain this sand before being eaten, are probably the most abundant source of this kind. True intestinal sand undoubtedly originates within the bowel and is devoid of any vegetable base like the foregoing. Chemically its constituents are approximately organic animal matter 72, inorganic, usually earthly salts, 28 parts in 100. This composition excludes biliary origin by its freedom from cholesterin and the scanty traces of bile pigment. The sand occurs almost always with intestinal disorders, especially mucomembranous colitis. The characters of the organic bases and the large number of bacteria included in it point to the intestine as the most likely seat of origin. When the patient of these authors was taking salicylate of bismuth, the sand was gray with a coating of bismuth. The richness of the material in urobilin and its poverty is unaltered bile pigment suggests that it is formed in a region of the bowel where the conversion of the bile pigment into urobilin is far advanced, namely, in the upper regions of the colon. The salts so largely comprising these concretions can hardly be formed in any but alkaline surroundings. The nature of the inorganic constituents is also fully compatible with intestinal origin. Nor is it necessary to look to unabsorbed residues of lime in food as the sole source of supply, because numerous observers have shown that a large part of excretion of this element by the body is affected by the intestine, while two, Kobert and Koch, found lime, magnesia and phosphoric acid which accumulated in the empty clean colon in a patient with a fecal fistula. The patient of

the authors of this paper partook of milk freely, but Bunge has shown that the actual amount of lime in milk is greater than in an equal volume of lime-water, so that this food may perfectly well have been the source of the lime.

Nature of the Cancerous Process.

Park (Buffalo Medical Journal) considers all the older etiological theories of carcinoma as unsatisfactory. Conheim's theory only explains the occurrence of certain cells in unusual situations, not the peculiar properties of the cells of malignant tumors. Irritation and trauma have relation to tumor growth only in the same way as they are related to, for instance, tuberculosis disease; they lower the resistance of tissues to malignant infection. The adverse opinions of many writers on the parasitic theory may be explained by the fact that for the most part the study of fresh and still living tissues has been neglected, and attention has been directed to sections of hardened and dead structures. In favor of the parasitic origin are: the infectious nature of analogous tumour-forms in plants and animals; the many analogies between tumours and infectious granulation-tissue tumours, the formation of metastases, and the local infectivity. Against the view that the cell inclusions in cancer are due to cell degenerations is the fact that similar forms have not been found in normal tissues or in benign growths; that they have not been produced in cells artificially, and that very similar forms are found after inoculation with cancer material. When these forms are examined under the microscope in still living cancer tissue, they are seen to possess amoeboid movement. In the cancer laboratory of the University of Buffalo, he has found in almost all malignant growths organisms which are pathogenic to animals, but which have not produced definite carcinoma. The many negative results of the attempt to produce cancer by transplantation of cancer tissue, or inoculation with cultures of the parasites, are explained by our knowledge of the great delicacy of the parasites for whose culture the usual bacteriological methods are inadequate. He has found best the method of Gaylord and Clewes; small collodion-sacs are filled with culture or fresh tissue juice and placed in the peritoneal cavity of an animal. This is followed by increase in violence in the cultures, and when inoculated into a second animal, an acute hæmatogenous infection follows with the formation of nodules in different parts of the body which have often the exact characters of an adenocarcinoma. Without entering into a description of the parasites observed, the life-history of which

has not yet been sufficiently studied, he considers that they are in all probability identical with the "young forms" described by Schuller, and of protozoan nature.

Four Cases of Rodent Ulcer Treated by X-Rays.

Pugh (Brit. Med. Jour., April 12, 1902) describes four cases of rodent ulcer treated by X rays. The writer thinks that the rays have a destructive effect on lowly organized and rapidly growing cells. Sitzings of not more than fifteen minutes are advised.

Case 1.—Man, aged ninety-three. Rodent ulcer on left cheek of three years' duration, about 1 inch in diameter. A coil giving a 10-inch spark was used, worked by a 12-volt battery. Tube 6 inches from face, which was protected by a lead mask. Exposure at first five minutes, afterwards ten, twice a week; in all, thirty-six exposures. Healed with sound scar. Two years later still sound.

Case 2.—Man, aged eighty-three. Rodent ulcer on left temple of thirty years' duration. Tube 4 inches from ulcer, and exposures of seven and a half minutes given. Healed in five months after thirty-four exposures.

Case 3.—Woman, aged forty-eight. Growth on forehead of two years' duration. Sitzings of ten minutes every day, afterwards reduced to five minutes. Healed in six weeks. This growth had been regarded as a keloid, but was probably a rodent ulcer.

Case 4.—Woman, aged seventy. Old case of rodent ulcer of nose treated before by knife and caustics. Ulcer recurred in scar. Soon healed after twelve Sitzings.—C. F. M.

The Action of Antistreptococcus Serum.

Lavil (Medical Press, June 4, 1902,) refers to some of his experimental and clinical observations. The action is a simple antibacterial one, not antitoxic, as he has satisfied himself by experiment. As to his clinical observations, in eleven cases of sepsis improvement took place in fifty per cent. In twelve cases of erysipelas a curative effect was exercised in seven cases, one case of scleroma recovering. Three cases of meningitis, one recovery; eight cases of pneumonia, all recovered; two of tuberculosis, both improved; three of phlegmon, all very much improved. The effect of the serum is not confined to streptococcus infection; it is useful also in staphylococcus infection. In a large number of cases the action was striking, sometimes it was slow, while in other cases no effect whatever could be discerned.

Indications that Our Methods of Fumigation are Faulty.

G. E. Pfahler, in the Philadelphia Medical Journal, Aug. 16, 1902, states that the requirements of a disinfectant are: 1. It must penetrate to every part of the room and destroy surely and quickly the most resistant forms of bacteria present. 2. It must not injure the materials with which it comes in contact. 3. It must be easy of application and not too expensive.

Rubbing the floors and walls with bread, with solutions of carbolic acid, bichlorid of mercury or chlorinated lime; or fumigation with sulphur dioxid, chlorin, bromin or iodine gases have all had their day and have been discarded in favor of formaldehyd gas as most nearly fulfilling the above conditions.

According to investigation formaldehyd will need an improved method of application or should be discarded.

His first experiment he placed cultures of the staphylococcus pyogenes aureus near the point of generation of gas. One tube had colonies upon blood serum, open, one closed and one just inoculated, another having a culture upon bouillon and one just inoculated, but both open. All grew well.

Considering that contagion is usually carried by the dust from the floor or upon the clothing, in his next experiment he made cultures from the surface of the floor, the bed and the mantle before, and repeated them after, fumigation. The cultures showed the ordinary germs found in rooms and apparently they grew as well after fumigation as before.

This experiment was repeated with a similar result. In all of these he used three times the amount recommended for 1,000 cubic feet. Previous to this he had been using the Walter Schlossman method by which formalin containing 10 per cent. of glycerin was vaporized in an apparatus which was supposed to generate enough gas in one hour to disinfect 1,000 cubic feet. The tests with this apparatus were made in rooms of 700 cubic feet capacity that were tightly sealed by means of strips of paper being pasted over all crevices. All rooms were exposed to the gas for at least 24 hours. Cultures in each test were made from the dust upon the surface of the floor, bed, window and wall before and after fumigation. In the first test the apparatus was allowed to run one hour, with the result that all cultures grew well. In the second it ran two hours and evaporated 5 ounces of formalin. All cultures grew well. A room was then exposed four and a half hours and 12 ounces of formalin were vaporized. All cultures grew. The gen-

erator was then allowed to run for six hours, vaporized 18 ounces, and the room remained closed 48 hours. All cultures grew.

5. Gas was generated for 9 hours, 28 ounces formalin vaporized and the room closed 56 hours. All cultures grew.

6. Gas was generated for 13 hours, 32 ounces formalin vaporized, and the room closed 50 hours. All cultures grew.

Dr. Pfahler then burned five pounds of sulphur in the presence of water, in the same sized room, having made the cultures as before. All grew.

The writer then used ten pounds of sulphur in the same sized room, with the result that one culture remained sterile. This culture was made from the surface of the bed. A culture made from beneath the spread showed a luxuriant growth. The same germs in all these experiments were found after fumigation as before. They consisted of moulds, various bacilli, staphylococci and streptococci.

Myoma of the Vagina.

W. R. Williams, (Lancet, August 9th) states that cancer of the vagina is rare, sarcoma is rarer still, and myomatous tumors are the rarest of all. Although the vaginal musculature is much thinner than that of the uterus, in other respects they are very similar, except that the former lacks the postembryonic developmental capacity of the latter. It is owing to this functional difference and to a different arrangement of the blood-vessels, that myomata are so much more common in the uterus than in the vagina. As in the case of their uterine congeners, the precise structure of vaginal "fibroids" has been much debated; but the great majority of recently reported cases, at least, have been myomatous. Vaginal fibroids are nearly always solitary, yet two instances of multiple vaginal myomata have been reported. Aberrant uterine myomata, sequestered from their original matrix, sometimes acquire a juxtavaginal habitat. The great majority of vaginal myomata originate anteriorly. At an early stage of development the vaginal "fibroid" presents as a small, hard, circumscribed, mobile tumor in the vaginal wall. As it increases in size it usually tends to project into the vagina, being covered by its mucocutaneous lining membrane. The tumor is at first sessile, and it may continue so, but more commonly it acquires a short, thick pedicle. Sometimes the pedicle becomes so elongated that the fibroid hangs from the vulva, and large tumors have been known to reach even as low as the knees. They increase slowly in size, but seldom attain large dimensions. When first noticed they were

about as large as a walnut, but specimens of the size of a child's head and weighing ten pounds have been met with. Large tumors cause great distention of the vagina and by their bulk interfere with the functions of adjacent organs, such as the bladder, rectum, etc. Extruding tumors are apt to be complicated by inversion of the vagina. Such tumors may even separate spontaneously and be expelled *per vaginam*. The tumors are generally encapsulated, circumscribed, nodulated, and of dense quasi-fibrous texture. Calcification is rare. The commonest superinduced changes met with are those resulting from septic infection—congestion, œdema, inflammation, necrosis, and gangrene. Any form of malignant disease originating in vaginal myomata is most exceptional. These fibroids occur, on the average, several years earlier than their uterine congeners. Most cases arise prior to the menopause. Most of the patients are single, and among the married the ratio of sterility is higher than normal. Menorrhagia or other menstrual derangements are seldom caused. The projection of the tumor at the vaginal orifice is usually the first indication of the disease. Myomata of any size, especially when they interfere with natural functions or present signs of septic infection, should be removed. If the pedicle is of no great thickness, and accessible, it should be transfixed, ligatured in two places, and divided between the ligatures. Before effecting division it is well to ascertain that no diverticulum of the vagina, bladder, or rectum is involved in the pedicle. In all other cases enucleation is the best method of treatment.

Pancreatic Calculus, with Notes of a Case.

Moynihan (London Lancet, August 9th) says that pancreatic calculi are generally white, greyish-white, or yellowish-white in color, and rounded, ovoid, or elongated, like a date stone. They are found in all parts of the duct of the pancreas, though much more frequently in the head; in the tail of the gland they are rarely seen. The calculi may be branched like coral, the trunk of the stone lying in the main duct. At times the canal of Wirsung is packed with a coarse mortar, or sand, or fine rounded pellets. The stones are chiefly composed of phosphorus and carbon salts. The antecedent condition necessary for the formation of stone is probably retention of secretion. This may be produced by inflammation of the canal of Wirsung, extending upwards from the duodenum, or by a chronic interstitial pancreatitis. Associated with calculi are found at times certain more or less profound alterations in the pancreas, such as acute and chronic

interstitial inflammation, atrophy, dilatation of the duct, cyst abscess, fatty degeneration, and carcinoma. Cases of carefully observed pancreatic lithiasis are so rare, that but little can be said as to the symptoms. There is usually pain or great discomfort in the upper part of the abdomen, at or near the middle line. This pain comes on in sharp, colicky attacks similar to, but less severe than those due to gall-stones. After the attack some fragments of stone may be found in the fecal movements. Diabetes is a common accompaniment of calculus, its onset being probably due to the chronic inflammatory changes induced in the gland by the calculus. Fatty stools have been occasionally observed. There is usually marked bodily wasting. A careful report is given of a case of pancreatic lithiasis in a woman aged fifty-seven years. The condition was correctly diagnosed and operation advised, upon the performance of which there was removed a pancreatic stone of the size of a kidney-bean. The interesting points in the case were:

1. The long illness of itself, but especially the length of time ere jaundice appeared, as proving the real origin of the condition.
2. The value of routine blood examination as an aid to diagnosis. In this case the leucocyte count was normal, while in cancer of the pancreas there is always a leucocytosis.
3. A peculiar bronzing of the skin, which at first suggested Addison's disease, the patient having many other symptoms in common, and later the pigmentation plus the progressive emaciation gave the patient the appearance of suffering from some obscure abdominal malignant disease.

The Transmission of Venereal Disease in Water Closets.

The New York Medical Journal, Aug. 23, 1902, comments on this condition as follows: Time was when the suggestion of water-closet contamination as the origin of a gonorrhœa in a patient was received with guffaws by his associates and with an incredulous but suave smile by his medical attendant. *Credia Judeus, non ego*, was the universal state of the mind. To be sure even now, in the absence of very definite reasons to the contrary, we consider it much more likely to have been contracted in the ordinary way. But we no longer regard water-closet transmission as a *reductio ad absurdum* of ætiology. Still as there are many who may, even now, be ultra skeptical, we would call attention to an article by Dr. M. T. Brennan, in *Revue de medicale du Canada* for July 9th. Dr. Brennan saw a patient with an acute gonorrhœa, and learned that while waiting to

enter his consulting room he had used the doctor's closet. The doctor took a slide from the discharge, and subsequently, moved by curiosity, examined the anterior and inner portion of the seat, and there found some crusts of pus, already dried. The crusts were moistened with sterilized distilled water and another slide taken. Both slides showed abundant gonococci. Dr. Brennan points out that, practically always, the penis of the man and the pubic hair of the woman come in contact with the front portion of the seat, and that almost infallibly, some of the crust, if present, will become moistened and be carried away on the persoa. Dr. Brennan enforces the very obvious, but rarely used precautions of (1) always examining the seat, (2) avoiding contact of the penis or pubes with the anterior part, (3) covering the forepart of the seat with paper, especially by women, (4) never pulling the plug until after rising from the seat, (5) cleansing the parts with paper after using public conveniences. Finally, he suggests a return to the method in vogue a millenium ago in Pompeii, where the seats of the *Sterquilinia* were incomplete in front. By this means all contact would be avoided. We would add that, in our opinion, the circumference of the aperture in the seats of water closets is, in this country almost universally too small; in addition to the danger above mentioned, the compression of the nates seriously interferes with defecation and tends to induce habitual constipation.

Chronic Suppurative Diseases of the Middle Ear.

James Kerr Love (Glasgow Medical Journal. July) notes two facts about chronic suppurative middle ear disease following the exanthemata:—(1). However far back the causative disease may have been (and it is often ten, twenty, or more years back), the discharge has probably been continuous ever since, in spite of the common statement that for long periods there has been no discharge. (2). The tympanic attic, or the mastoid antrum, or both, are also diseased, and cure is not probable except by operation.

After the exanthemata, cases of obstinate suppurative ear disease are commoner in children who have enlarged tonsils and post-nasal adenoids than in those who have not. Without any other operative treatment, in cases hitherto rebellious to treatment the patients will sometimes recover if the nasopharynx is cleared of adenoid masses. Recurring suppurative disease of the middle ear also will sometimes finally disappear when the nasopharynx is cleared of adenoid masses.

In acute mastoiditis there is not only pain on pressure, but very often apart from pressure, and spreading in almost every direction over the head, face, and neck. In cases of latent mastoid abscess, pain, about which the patient has known nothing hitherto, may sometimes be elicited on pressure. When it is present, it is a valuable sign that the cells contain pus, or that the bony mastoid process is inflamed. The absence of pain, however, does not negative the disease of the mastoid process or its cells. If there is bulging on the upper and posterior part of the external wall of the canal, and if there a probe enters and impinges on diseased bone, the mastoid cells contain pus and are discharging by way of the border cells into the external auditory canal. If granulation masses found in the middle ear spring from the upper and posterior part of the cavity (opening of the auditus), the mastoid cells usually contain pus or granulation masses.

Mastoid auscultation is practiced in the following manner: An ordinary rubber tube, such as is used in making an otoscope, or such as forms part of a binaural stethoscope, is furnished at one end with an ear-piece to fit the ear of the surgeon, and at the other with a small metal or vulcanite terminal shaped like an aural speculum. This latter is placed over the suspected antrum on the mastoid process, and, while the surgeon listens, a tuning fork is sounded on the top of the head or on the bridge of the nose of the patient. A pus-filled antrum is supposed to modify the sound which passes through it, so that it differs from that arriving at the surgeon's ear through an air-filled antrum, and thus gives evidence of diagnostic value. This test, however, should be used only as an auxiliary one.

The Causation and Prevention of Phthisis.

Byron Bramwell (The London Lancet, July 19, 1902.) considers the various precautions which the individual should take in order to protect himself against phthisis and other forms of tuberculous disease.

He should endeavor to increase his vital resistance, to avoid all conditions likely to produce the local alterations forming a suitable nidus for the growth of the tubercle bacillus, and to prevent the entrance into the body of the tubercle bacillus and its spores.

Persons who inherit a strong tendency to phthisis should be well fed, well clothed, and well housed; they should live, if possible, in a high, dry, and pure atmosphere, and in a well-built, airy and well-drained house, which is not built on a cold and

damp subsoil, but is surrounded by plenty of fresh air and sunlight. They should always keep the bedroom window open at night, winter and summer. Excesses of all kinds should be avoided, and an occupation or profession should be chosen which does not necessitate the breathing of an irritating or dusty atmosphere. If their chest development is defective they should systematically practice lung gymnastics with a view to increasing their respiratory capacity.

Persons living in close contact with phthisical patients should be scrupulously careful to take every means to prevent the introduction of the tubercle bacillus into their own bodies. The chief risk is the inhalation of air containing the tubercle bacillus and direct infection by kissing, using contaminated cups, etc.

The rooms in which phthisical patients live should be kept scrupulously clean. No dust should be allowed to accumulate, all the wood work being cleaned with a damp cloth. Free ventilation is of the greatest importance: (1) for the health of the patient himself and the other occupants; (2) in order that the poison, if present in the air, may be freely diluted; and (3) with the object of destroying any tubercle bacilli that may be present. Fresh air and sunlight kill the germs. A healthy person should never sleep in the same bed with a phthisical patient.

The Diagnosis of Diseases of the Sigmoid Flexure and Rectum, with Special Reference to the Proctoscope.

F. S. Edwards, in the *British Medical Journal*, July 19, 1902, says that pain in the rectum is a symptom of fissure, of hæmorrhoids, of ulceration, and of certain morbid growths. In fissure the pain is very severe and out of all proportion to the size of the lesion, and lasts for several hours. In hæmorrhoids the pain varies as the degree of inflammation of the parts. A thrombotic pile always causes pain. In ulceration, whether simple or carcinomatous, there is every variety of pain, depending upon the site of the lesion—less when high up, more when low down in the sphincteric region.

Hæmorrhage comes next to pain in order of frequency as a symptom of rectal disease. It is usually insignificant in quantity in fissure, but in the case of internal hæmorrhoids considerable blood may be lost. In these cases the blood is usually venous, may be arterial. Carcinoma of the bowel is usually attended with some hæmorrhage, the faces being streaked with blood, though it may be so severe as to produce fainting.

Protrusion of the rectum occurs in piles,

polypi, villous growths, and prolapsus recti. Too much reliance must not be placed upon the nature and form of the stool; if a stricture is present, but high up, the faces may be of normal size when voided. Again, ribbon-like movements may be due simply to a spasmodic action of the sphincter.

The presence of pus indicates the existence of an abscess or blind internal fistula, ulceration, and stricture, or of an acute proctitis, such as a gonorrhœal inflammation.

The escape of mucus suggests catarrhal inflammation or, possibly, invagination or intussusception. When there is a large watery discharge, like the white of an egg, a villous tumor is almost sure to be present. Mucous casts point to a membranous colitis.

For examination, he is in the habit of relying on the finger alone in the majority of rectal cases, but for some the use of the speculum is not only desirable but necessary. And for this purpose he uses almost entirely Kelly's tube—or the protoscope—although a bivalve speculum is useful for douching the rectum or in making applications.

Leukocyte Count in the Diagnosis of Diseases of Children.

According to Head (*Archives of Pediatrics*) infants at birth have a high and variable leukocyte count, ranging from 14,000 to 27,000 cells. After the fourth day, with the increase in body weight, the leukocyte count shows a moderate decrease to 12,000 or 14,000 which is maintained to some degree throughout the first year of life. After the age of 2 years, the leukocyte count in healthy children is not different from that of adults. As the physiological processes, that of digestion plays a prominent part in the rise and fall of the white bloodcells. In young infants, digestion leukocytosis is very marked, so that, in making leukocyte counts, a time must be selected some hours after a meal. The variability of the leukocyte count in the newborn and in the first year of life is such that in the diagnosis of disease of this early age it cannot be relied upon except in those infections accompanied by a low count. Between the ages of 1 and 2 years the count may be of considerable value if digestion leukocytosis is excluded. The chief value of the procedure, however, is in assisting in the identification of such diseases as are characterized by a diminution in the number of leukocytes. This group of diseases includes typhoid fever, influenza, measles, malarial fever, miliary tuberculosis and perhaps tuberculous meningitis. After the individual has reached

the age of 2 years, the writer believes that the leukocyte count in disease is an invariable and as fixed as in diseases of adult life, and that it can be made as helpful in diagnosis in the former class as it is in the latter. The author has studied the blood in 22 cases of typhoid fever in children and he has found that the low leukocyte count is constant and fixed and that complications cause a leukocytosis. The value of the procedure is in assisting the establishment of the diagnosis and a means of determining the presence of complications. From 13 cases of appendicitis he concludes that well-marked leukocytosis is usually present. The leukocyte count is useful as an aid to diagnosis between appendicitis, renal colic, hepatic colic, acute intestinal obstruction and typhoid fever. On the other hand, acute gastritis, acute nephritis, acute enterocolitis could not be differentiated from appendicitis by this method, because they are all accompanied by leukocytosis. There was a pronounced leukocytosis in every one of 12 cases of lobar pneumonia; but the number of cases studied was not sufficient for the formation of conclusions concerning the number of leukocytes in complicated cases or in double pneumonias. A high leukocytosis would exclude typhoid fever, malaria or influenza. In cases of cerebrospinal meningitis or appendicitis the leukocyte count would be of no assistance in excluding lobar pneumonia. In 3 cases of bronchopneumonia well-marked leukocytosis was always present. In 5 cases of meningitis, well-marked leukocytosis was always present, and the development of complications did not modify it. In the diagnosis between meningitis and uncomplicated typhoid fever the count is almost, if not absolutely, diagnostic. It is also probably diagnostic between meningitis and hysteria. In one case of brain abscess leukocytosis was present. In one case of brain tumor leukocytosis was absent, so that the presence of leukocytosis would serve as a differential symptom between meningitis and brain tumor. In uncomplicated influenza, of which 2 cases were studied, there is a normal or reduced number of leukocytes in the blood, and the blood count may, therefore, be used in differentiating influenza from meningitis. In children, as well as in adults, diphtheria is accompanied by a well-marked leukocytosis. In measles, on the other hand, the leukocytes are below normal during the entire course of the disease. In scarlet fever the leukocytosis begins a day or so before the rash appears, reaches its height about the time of the full development of the exanthem, and falls with the fading of the rash. Complications have little effect

upon it. In smallpox the leukocytosis appears when the rash becomes vesicular and reaches its height with the formation of pustules. Out of 4 cases of acute articular rheumatism, 3 showed leukocytosis and one did not. In 5 cases of miscellaneous septic infection a well-marked leukocytosis was found in all. It may be said, therefore, that the occurrence of a leukocytosis in a sick child may point to the proper diagnosis of the condition.

Report of a New Case of Syphilitic Tumor of the Stomach.

Einhorn, at the Sarotoga meeting of the American Medical Association reported a case of syphilitic tumor of the stomach, in addition to some published about two years ago. The writer divides syphilis of the stomach into three distinct groups: (1.) Gastric ulcer of syphilitic origin. (2.) Syphilitic tumor of the stomach. (3.) Syphilitic stenosis of the pylorus. This new case belongs to the second group. Several competent physicians had made the diagnosis of cancer and had advised operation. Einhorn at first also entertained a similar view. On further reflection, however, there were several features which spoke against cancer of stomach, viz., the long duration (seven years) of the disease, absence of considerable loss of flesh, presence of free HCl, absence of isochymia, and the history of a distinct syphilitic infection. The patient rapidly improved under antisyphilitic treatment (sodium iodide and mercury inunctions) and the tumor entirely disappeared in six weeks. While the above symptoms (gastric disturbance of long duration, etc.), if all present, may justify the surmise of a luetic nature in a palpable growth of the stomach, still a positive diagnosis can be made only under the following conditions: 1. Antisyphilitic treatment improves the subjective symptoms. 2. It also effects a gradual disappearance of the growth, so that ultimately it cannot be discovered by palpation.

Purpura Fulminans Following Scarlet Fever.

Hubert E. J. Biss (The London Lancet, August 2, 1902,) reports a case of purpura fulminans following scarlet fever, which occurred in a boy, 3½ years of age. The patient was admitted into the Grove Fever Hospital on May 16, 1902, certified to be suffering from diphtheria. On this supposition injections of diphtheria antitoxin were given, later, however, it was found that the patient was suffering from scarlet fever complicated with a tonsillar exudate which contained streptococci. All of the symptoms abated on the morning of the

21st. On the evening of that day the patient became very feverish. The temperature rose to 102.4 deg. F. On the following day urticarial rash appeared on the trunk. The patient later developed otitis media and diarrhea. General desquamation occurred. A masclar purplish-red eruption developed about the knees, ankles and elbows on the 25th. The patient improved rapidly until June 4, notwithstanding that the temperature fluctuated between 101 deg. and 99 deg. F. On that day a petechial eruption developed upon the trunk, and on the next morning the extremities were also affected. Bleeding from the gums also occurred. Shortly before death the patient vomited a half a pint of blood on two occasions. A post mortem examination gave the following results: Subcutaneous hemorrhages were abundantly present and the visceral pericardium and pleuræ also showed a few punctiform hemorrhages. The pleural cavities each contained a few drams of blood-stained fluid and the trachea and bronchi contained a pinkish, frothy mucus. Medium-sized submucous hemorrhages were found in the stomach and intestines. The kidneys were slightly enlarged; their parenchyma was composed almost entirely of fat. A few of the calices contained blood clots. Thickness and ulceration of the throat were also observed.

The Treatment of Convergent Squint in Hospital Practice.

G. T. Brooksbank James (The London Lancet, Aug. 2, 1902,) contends that the most important reason why the treatment of convergent squint is so unsatisfactory is that no stereoscope of suitable construction and small cost is at the command of the ordinary hospital patient for home use. He presents a description, which is accompanied by an illustration of the stereoscope. The author states that this instrument is constructed of the cheapest materials and can be used in cases of convergence of higher degree. It consists of 2 mirrors, 8 centimeters square, united by a hinge. To the lower border of each mirror is attached a brass bar, 15 centimeters long, with a clamp obliquely placed at its extremity. The bar is freely movable but can be fixed at any angle to the mirror by a toothed stay which gives additional firmness. The angle at which it is usually placed is 115 deg. When not in use, the book is undone and the instrument can be folded into a convenient shape. The stereoscopic figures employed vary much in size according to the visual acuity and youth of the patient. Duplicate colored scrap figures on glass slides are very useful, parts of

each figure having been carefully cut out. It is of great service to use letters on each glass slide alongside or across the figures and leave gaps between them. On fusion in the mirrors they are seen as short words such as "Tom," "Bob," etc., and act as valuable controlling tests in children who can read. Almost any object the ingenuity of the experimenter may devise can be adapted to the instrument. The ordinary photographic views in the shops can be employed. They are first cut in half and transposed, right half in left clamp and *vice versa*; controlling dots are useful, of course, with these. The oblique position of the clamps presents the objects nearly square in the mirror to the observer and facilitates their fusion.

Cocainisation of the Spinal Cord.

M. Guinard, (Edinburgh Medical Journal) has modified the technique, so as to avoid the occasional undesirable accompaniments, namely, the intolerable headache, the pyrexia, and the syncopal attacks. Influenced by the researches of Ravaut and Aubourg, the author has given up water as the vehicle for the solution of cocaine, and employs the cerebro-spinal fluid of the patient who is the subject of the operation. The writer recommends the following procedure: The patient is seated with the legs dependent and the head inclined forward. The skin is disinfected in the lumbar region. A point is selected in the middle line a finger's breadth below a horizontal line joining the iliac crests, and the skin is anæsthetised by chloride of ethyl. The left index is placed on the spinous process immediately above, and the needle, 8 cms. in length, is pushed in gently from below upwards. At a depth of 4 or 5 cms. there is no longer any feeling of resistance, and on withdrawing the silver wire from the needle, 60 to 80 drops of cerebro-spinal fluid are allowed to flow into the sterilised receptacle. Six or seven drops of a concentrated solution of cocaine (1 cgrm. to 2 drops of water) are mixed with the cerebro-spinal fluid, the mixture is drawn up into a syringe and injected slowly through the needle. M. Guinard has carried out this method in more than fifty cases without an unpleasant symptom.

"Sprains" and Modern Science.

The Medical Press and Circular Notes the following: Of the numerous injuries classified under the conveniently general description of "sprains," the vast majority affects the ankles and wrists. There can be no doubt whatever that in many cases an obscure fracture has escaped notice, and has been thus diagnosed. Or there

may be cases in which the exact apposition of the ends of broken bone, as in a transverse break of the tibia, have rendered accuracy of diagnosis difficult or impossible. The Rontgen ray methods have now come to the aid of the surgeon, and straightway this great class of obscure fractures has been rescued from the rubbish heap of sprains. Another class of injury that has also to a great extent been brought within the range of accurate diagnosis by the Rontgen methods is the separation of the epiphyses. It is surprising how, even at this hour of the day, many practitioners are found content with their diagnosis of sprain in cases where radiographic examination at once reveals a fracture. As a matter of routine method, any medical man who is called upon to deal with an obscure injury of the kind should resort at once to a skilled radiographer, with a view of securing further evidence. For many reasons it will be wiser to entrust the X-ray examination to a properly qualified medical operator. Should the injury turn out to be a fracture, the medical man will be protected from the risk of legal action for negligence and malpraxis and the patient will be fully informed of the actual state of matters. A radiogram should always be taken after the splints are applied in order to ascertain the proper reduction of the fracture.

The Late Effects of the Roentgen Rays.

It is evident, says the London Hospital Journal, that we are as yet far from having attained to completeness of knowledge in regard to the effects which may be produced by the Roentgen rays. That they may cause very unpleasant and slowly healing "burns" is now well known, as also that these effects may not show themselves for some time after the application. Again, it has been shown that in some cases, even when no ulceration is produced, considerable pigmentation may be set up, so that it may occasionally happen that in the attempt to get rid of a degree of hirsuteness which may be, comparatively speaking, not a matter of great consequence, an amount of pigmentation may be produced which may be most annoying and may last for a long time. Lately, however, another unfortunate result of the rays has come to light, namely, the development of disfiguring telangiectases on the area dealt with. These starlike dilatations of the blood-vessels when they occur in any number may be very disfiguring, and there is this that is curious about them that in some cases a considerable time—several months—seems to have elapsed before they showed themselves. There can be no doubt that

the rays in passing through the tissues exercise a selective power, affecting certain tissues destructively (as is well shown in their action upon certain forms of cancer), and it may be presumed that in the cases mentioned the dilatation of the cutaneous blood-vessels has either been due to interference with the circulation by a form of scar contraction following the partial destruction of certain tissues around the vessels, or may even have been due to the destructive effects of the rays upon the walls of the vessels themselves, leading to their gradual dilatation under the pressure of the blood. But, however they are caused, they serve well to show how careful one must be in the use of an agent the nature of which we do not as yet fully understand.

The Etiology of Chronic Nephritis.

Dr. A. E. Elliott, according to the London Hospital Journal, is of the belief that the absorption of toxic material from the intestinal tract plays the most important part of its etiology. As a curious and interesting example of the manner in which the same facts may be differently interpreted according to the light in which they are regarded we would refer to what he has concerning the relation between kidney disease on the one hand and diet and purgation on the other. In the treatment of chronic kidney disease it has long been held by many observers that a careful dietary is a matter of the first importance. Of late some earnest protests have been made against the views which were generally held on the subject, but certainly until quite recent times the aim and intent of most practitioners in devising a dietary for a case of chronic Bright's disease has been to provide one the waste products resulting from the digestion of which should not take the form of substances likely to irritate the kidneys or embarrass them in the performance of their functions. Again, the relief given to the nephritic symptoms by purgatives has been regarded as analogous with the relief often given by Turkish baths, due in both cases to a removal of the toxins from the blood, in the one case by the intestines and in the other by way of the skin.

To Dr. Elliott, however, the editor says, these facts appear in a very different light. Considering that, as in the nephritis caused by plumbism so in the other cases, the kidney disease is due to the presence in the blood of some irritating toxic material, and looking as he does to decomposition of the intestinal contents as the source and perennial fount from which this toxin is absorbed, he regards careful dieting as advantageous, because by its means—by giving

a food little likely to decompose—the supply of toxins may be diminished; while he regards the morning purge, the clearing out of the colon, and the excitation of the functions of the intestine which are admitted to do so much good, as doing it, not by increasing the elimination of waste products circulating in the blood, but by clearing away the very source from which the blood is becoming poisoned.

It is an easy thing, no doubt, to assume that the intestinal contents which are the source of all good—the pabulum from which the tissues derive their nutriment, the muscles their strength, the very brain its power of thought—are also the root of all evil, and among other evils, of chronic nephritis; yet the theory would be more satisfactory could we lay our fingers on the poison. Still there is much to be said for Dr. Elliot's contention, and there certainly is this great thing to make one cling to it, namely, that if true it throws a far more hopeful light upon the treatment of this disease, if caught at an early stage, than seems to be cast by other and more generally accepted views as to its etiology. Dr. Elliot points out, as emphasizing his text, that when the kidneys fail in their excretory function, the liver cells degenerate because of the toxic substances which are present in the blood; that the liver then fails to metabolise substances which come to it, and adds its own quota of toxic material for the blood, thus still further irritating the kidney, and that the vicious circle thus formed continually deteriorates the general condition of the patient.

The relation of chronic nephritis to mode of life seems to have a distinct bearing upon this problem, for the inactive life led by so many city people, who are more especially the victims of this disease, undoubtedly tends to promote those conditions in which toxæmia from intestinal decomposition would be most likely to occur. These people almost invariably over-eat themselves, and as showing that the result is to throw upon the kidney the excretion of toxins likely to be injurious to its tissues, Dr. Elliot points out that in such people the urine is often quite toxic when injected into animals. The basis of these metabolic disturbances is often, he says, an atonic intestinal catarrh. And perhaps it may be so. That ultimately the vicious circle above alluded to is set up, and that in many cases before the patient has come under treatment, his disease had led to degenerations which it is beyond the power of medicine to cure, is true enough. But it may be that in origin, long before the development of symptoms, the disease had its commencement in some form of toxæmia starting in

the intestinal contents; a much simpler affair than that inborn tendency to perverted metabolism to which some have recourse in explaining the etiology of nephritis.

Tuberculosis of the Genital Organs in the Female.

Gorovitz (British Medical Journal) mentions the chief points of genital tuberculosis in the female in the following statement: (1) Tuberculosis of the female genital organs occurs much more frequently than has hitherto been supposed. By the help of histological and bacteriological investigations, and of inoculation, many cases of this class of lesions, which would formerly have escaped notice, can now be diagnosed with precision. (2) Genital tuberculosis, though usually secondary, may be primary. The main object of the practitioner is not only to recognize the primary forms, but to make the diagnosis in the early stages when the lesion has made but little way. Examination of the secretions and of shreds of tissue removed by scraping (curettage) will, from this point of view, render very great service in cases of tuberculous endometritis. This affection, it is well known, is almost always consecutive to tuberculosis of the fallopian tubes, which is much more frequent lesion. (3) The results of clinical observation and of surgical intervention show that tuberculosis excites, on the side of the peritoneum, more or less marked reaction, and particularly a special form of peritonitis, with encysted effusion, known under the term of "ascites of young women." (4) Consequently, it is advisable in practising abdominal section for tuberculous peritonitis in the female to examine the uterine annexes, and to make sure of their condition; it will often be discovered that these were the starting points of the disease, and then, if it be possible, the affected organs should be removed. (5) This removal should be effected by the abdominal method, and the operator should aim at a free extirpation; the abdominal section will serve the double purpose of permitting removal of the original affection, and of acting with beneficial results on the peritoneal lesions; such treatment has, in the practice of Bouilly, been attended with decided success. (6) With regard to the pathogenesis of genital tuberculosis, this affection may be set up by the "ascending way" and from without. (7) Experimental researches made by the writer show that the tubercle bacillus deposited without injury on the mucous membrane of the genital apparatus is capable of germinating there, and of exciting the characteristic lesions of tuberculosis.

The Gausation and Prevention of Phthisis.

Bramwell (The London Lancet, July 12, 1902,) states that for the production of phthisis three factors are usually necessary, viz: 1. The introduction (either directly into some part of the respiratory passages, or indirectly into the lung tissues through, for example, the gastro-intestinal tract) of the tubercle bacillus or its spores. This is essential. 2. The presence in the respiratory tract of a suitable nidus for the development and growth of the tubercle bacillus or its spores. It is probable that this is usually necessary unless the dose of the poison is very large. 3. Defective vital resistance, in other words inability of the tissues, more especially of the respiratory tissues with which the tubercle bacillus and its spores first come in contact, to resist the development of the tubercle bacillus or its spores, after they have been implanted in the suitable nidus. The resisting powers of the tissues against the invasion of the tubercle bacillus—the vital resistance—varies in different individuals and in the same individual at different times, in accordance with age, condition of health, etc.

If the above propositions are well founded, the main points to which attention must be directed, in order to prevent the development of phthisis in the individual, are as follows: 1. To prevent the introduction of the tubercle bacillus or its spores into the body and, in the case of phthisis especially, into the respiratory tract. 2. To prevent the production or development in the respiratory tract of the local conditions which form a suitable nidus for the development of the tubercle bacillus (unhealthy condition, abraded surface, retention of secretions, etc.) 3. To raise the resisting power of the tissues as a whole, and of the respiratory tissues in particular, so that they may be able to destroy and to evacuate the tubercle bacillus after it has been introduced and lodged in the suitable nidus.

Treatment of Hemiplegia.

Leonard G. Guthrie (Indian Medical Record) says: "(1) Neglect and want of treatment aggravate severe, and retard the recovery of mild, cases. (2) The evils to be foreseen and guarded against are articular adhesions, late rigidity and muscular atrophy. (3) Articular adhesions should be prevented by passive movements of each joint from the very first. (4) Faulty positions of the limbs should be constantly corrected, or they will become chronic. (5) Contraction of muscles should be treated by endeavors to improve the nutrition of their weaker opponents. (6) Massage,

passive movements, and to a less extent electricity, should be used with this object. These agents not only counteract muscular atrophy from disuse, but probably take the place of normal stimuli and invigorate the neurons. (7) The recovery of mild cases may be often hastened by re-education of movements. Want of re-education frequently prevents recovery. (8) Re-education consists in a combination of passive and active exercises. (9) Movements should be first encouraged in those parts which naturally tend to recover first. (10) Incoordination and general weakness of limbs which have yet regained power of movement should be treated by exercises and mechanical therapeutics. (11) It is important to find out what the patient can do and to make him do it."

The Early Operative Treatment of Acute Mastoid Inflammation.

E. B. Deuch, in the Medical News, sets forth his views on the treatment of acute mastoiditis. The Doctor points out the importance of close attention to the mastoid during the course of acute suppurative otitis, especially when that condition arises as the result of infectious fevers, such as grip, measles, etc. The two most reliable indications of mastoid involvement are the presence of pain and tenderness over the mastoid antrum and sagging of the upper portion of the auditory canal. Fever is an unreliable guide, as extensive affection of the bone may take place with little febrile disturbance; particularly is this the case in adults. Pain upon pressure over the tip of the mastoid is not as sure an indication as pain over the region of the mastoid antrum. He has little faith in the wisdom of resorting to abortive measures, such as the use of the Leiter coil, local blood letting, etc., and strongly advises exploratory opening of the mastoid cells. By proper aseptic precautions and familiarity with the anatomy of the parts the danger of opening the mastoid is greatly minimized. The author advocates a free opening, exposing the antrum and smaller cells to allow of thorough removal of diseased bone. Abortive treatment is seldom effectual and may obscure important symptoms of complications.

Diphtheria and Diphtheria-Like Bacilli.

At a recent meeting of the New York Pathological Society, Dr. Anna N. Williams outlined the work being done as follows: (1) A study of the diphtheria and diphtheria-like bacilli found in a series of clinically typical diphtheria at the hospital for contagious diseases; (a) Serial smears of cultures directly from throats and noses; (b) Pure cultures isolated from these cul-

tures. (2) A study of the diphtheria and diphtheria-like bacilli found in healthy and diseased throats in a town during an epidemic of diphtheria; (a) smears of culture directly from throats; (b) pure cultures isolated from these cultures. (3) A study of diphtheria and diphtheria-like bacilli found in sore throats during an epidemic of diphtheria at a home for destitute children; (a) pure cultures. (4) A study of pure cultures of diphtheria and diphtheria-like bacilli from sources other than those given above; (a) on various artificial culture media grown under various conditions; (b) in living tissues of guinea-pigs, white rats, and goldfinches; (c) in symbiosis with other bacteria.

The Parasitology of Malignant Growths.

J. George Adami, according to the *Chemical Journal*, draws the following deductions from his study of the subject: (1) There exists one form of tumor of highly malignant type in which the infiltrating cells are not those of the organism itself but are derived from another organism. The development of the syncytioma must be attributed to either an increase in the invasive properties of the syncytial cells, or a lessened resistance on the part of the maternal tissues or a combination of the two. If microparasites play any part in the production of the tumor, that must be either by exalting the infiltrative powers of the one or by lowering the resistant powers of the other. Proof positive of the existence of such specific microparasites is still wanting. Admitting that microparasites and their products are capable of inducing cell-proliferation, we must also admit that other external agencies have the same capacity, so that that microparasites, at most, may be one of the causes of aberrant cell growth. The prevalent conception of cancer parasites, as existing within the cancer cells, involves the idea of malignant growths being the product of parasites acting within parasites, or as shown by this study of the syncytioma the tumor cells themselves are essentially parasitic in the organism.

Spontaneous Expulsion of Polypus in Young Women.

Brothers (*Amer. Journ. Obstet.*, June, 1902) reported the case when a polypus was expelled spontaneously from a young single woman aged 22. The pedicle was an inch and a-half long. The tumor was of the cervical mucous type. Brothers stated, however, that it was sent him by a medical friend, who was not permitted to examine the patient, and therefore was not certain whether the tumour was expelled from the rectum or from the vagina. James N. West, in discussing this case, reported a case

where a polypus of large size was expelled by a girl aged 15. She continued to be delivered of polypi for several weeks and then came under the care of Bache Emmet. A large mass was then found in the vagina which recurred on removal. Ultimately the patient was admitted in a hospital under Janurin, who used the curette, as the disease was too advanced to allow of hysterectomy. The patient developed sarcomata in the shoulder and under the breasts, dying about two months after the application of the curette.

Obliterating Endarteritis.

A. P. Gould in the *London Lancet*, says that it has been attributed to injury, to external cold, to neuritis, to injuries of a weak and depressed vascular system, to the repeated impact of foreign particles against the sides of a small artery setting up irritation or molecular unrest within certain of the endothelial cells, which manifests itself by arousing the little center mass of nuclear protoplasm to activity. As a matter of fact, so little is known of the ultimate causes and processes of disease that it is difficult to accept or reject such theories. Of the known causes syphilis is the most certain; influenza, alcoholism, erythromelalgia, cold, contusions, and profuse thrombosis, or phlebitis may be regarded as more or less immediate factors of the disease. Diabetes usually causes gangrene by exciting it. There is little to say on the subject of treatment. The following may be carried out. Rest, local warmth, anodynes for pain, usually in large doses, massage to promote the collateral circulation, absorption through the lymphatics and evacuation of waste products from the cells and their tissues. In the acute stage the tenderness is too great to admit of it. In the early cases it must be cautiously employed. When the disease seems to be arrested and one has to deal with its effects only, it may be used a little more vigorously. Small, mummified areas of gangrene, especially in the extremities, may be left to separate of themselves. Extensive gangrene, especially the mixed form, demands amputation. The relief of the exceedingly great pain usually compels the patient to submit to the operation. The amputation must be done high above the gangrenous area and at a place and by a method which throws the least strain upon the vessels of the part. Thus amputation through the lower part of the thigh had best be preferred to disarticulation at the knee and musculo-cutaneous flaps are to be chosen in preference to pure skin flaps.

Depletion and Depression.

We take the following from the Army and Navy Journal for August 9th: "The perusal of a letter written sixty-one years ago brings forcibly to view the change in medical practice which has occurred during this period. The writer was the nine-year-old daughter of a clergyman, and she describes how the doctors dealt with her father in a case of sore throat. First, they bled him; the next day they gave him calomel and jalap, and the third day dosed him with a powerful emetic. The effect upon the good clergyman is shown in a letter from him, dwelling upon the unsatisfactory state of his spiritual condition and rejoicing that life is short, so that the end will at the most soon come. There is unconscious humor in the apparent absence of any suspicion that the doctors had anything to do with his state of spiritual gloom. As he lived forty-five years longer, and to the age of eighty-five, it is apparent that he had a constitution which was too much even for the old school doctors; but their victims must have been numerous. Here is a problem for the philosopher: To determine the relation between the old practice of medicine and gloomy views of religion. No doubt bad feeding and heroic systems of medical treatment are responsible for a very large amount of the heresy that is abroad in the world."

Enteric Fever not Typhoid.

Otto Lerch (New Orleans Medical and Surgical Journal) gives the history of a man, aged 43 years, who suffered from an acute infectious disease, enteric in origin, but not typhoid in type. The fever-chart did not resemble one of typhoid, not even of an atypic case. The onset, according to the history, was sudden, though prodromes seems to have preceded it. The eruption was entirely different from typhoid. It consisted of festoons arranged in scallops, with here and there rosettes of macules. It extended over chest, abdomen, back, and arms. There was no tremor of the tongue. These were the symptoms of infection: Clouded sensorium; typical facies; dry, painted tongue; tenderness on pressure over abdomen; enlarged spleen; congested liver. Widal's reaction was positive. The patient died on the eighteenth day after the onset, with heart-failure. The necropsy showed the heart to be fatty. Peyer's patches in the intestine were ulcerating. Lerch is of the opinion that this was a case of enteric fever caused by the common colon-bacillus, or some kindred organism, and not by the bacillus typhosus.

Large Doses of Antitoxin.

McCollom, in the Boston Medical and Surgical Journal, makes a plea for the use of larger doses of antitoxin in the treatment of diphtheria. The writer has made a careful study of the question, which has led him to the following conclusions:

1. That the ratio of mortality of diphtheria per 10,000 of the living was very high in Boston previous to 1895.
2. That the ratio of mortality per 10,000 has been very materially reduced since the introduction of antitoxin,
3. That the percentage of mortality in the South Department is lower than that of any of the hospitals taken for comparison.
4. That since larger doses of antitoxin have been given, the death rate has been materially reduced, this reduction having occurred in the apparently moribund cases.
5. That no injurious effect has followed the use of the serum.
6. That to arrive at the most satisfactory results in the treatment of diphtheria, antitoxin should be given at the earliest possible moment in the course of the disease.

Report of a Case of Dementia Praecox.

William Rush Dunton, Jr., in the American Journal of the Medical Sciences, states that the majority of authors agree that this disease is a degenerative psychosis. Dunton describes the case of a Norwegian woman, thirty-one years of age, and sums up the symptoms of the case which he reports as follows: Mental depression, exaggerated tendon reflexes, a weakening of the heart's action, cyanosis, and a decrease of weight while taking nourishment well. Simple perception of external ideas was not interfered with, but there was fallacious sense perception. Negativism was present, but not very marked. Disturbance of the emotional life was shown by periods of depression and attacks of boisterousness. Stereotypy and verberation were shown on several occasions. Katatonic rigidity was present. This case seems to illustrate the katatonic form of dementia præcox.

Temperature After Mastoid Operation.

Harris, in the Annals of Otolaryngology and Laryngology, records 100 uncomplicated cases of mastoiditis operated upon at the Manhattan Eye and Ear Hospital. He feels warranted in making the following conclusions:

1. Postoperative temperature of moderate amount is customary in mastoiditis.
2. The cause of it has not yet been definitely determined.
3. Without other symptoms it is without significance and should not be a source of anxiety.

The Nervous Affections of the Heart.

G. A. Gibson, (Edinburgh Medical Journal, July) says that the most interesting phenomenon in angina pectoris is of recent observation. The condition of the sensibility of the skin, tested objectively, has in recent years yielded most interesting results. The observations of Mackenzie and Head have led to a new era in the investigation of the affection. Over considerable areas of the surface of the body, corresponding with more or less accuracy to the regions in which pain is subjectively felt, there is an exaggeration of sensibility. This hyperæsthesia is most commonly over the upper intercostal nerves, but it may be ascertained to be present over part of the neck and arm, as well. The tenderness may be discovered by the application of varying degrees of pressure with a blunt or a sharp instrument, or by gently pinching the skin with the finger and thumb. In some instances after pain and tenderness have been present for a considerable time, the latter is succeeded by diminution of sensibility. He emphasizes the absurdity of the common phraseology which would divide the affection into true and false, and he hopes that the term pseudo-angina will, before long, be banished from modern medicine. The writer prefers a classification based upon a subdivision of the different varieties of pain, organic and inorganic. The inorganic varieties fall into toxic and neurotic classes. The toxic class embraces chemical or microbic influences. Tobacco and alcohol are often concerned, but tea is an extremely rare cause of painful cardiac symptoms. Among the microbic factors, influenza is certainly the most powerful, but malaria, diphtheria and typhoid fever also furnish instances. In every real instance of neurotic angina pectoris, it will be found that there is some cardiac weakness.

Puerperal Eclampsia.

Walter L. Watt (Glasgow Medical Journal, July) notes the advisability of induction of premature labor or of immediate delivery. The supporters of these methods allege that, with the emptying of the uterus, the fits will cease. Clinically, this is opposed to facts, since uterine contractions directly excite the convulsive attacks, and the effects of pregnancy on the maternal organism by no means disappear immediately after delivery. It would seem better not to induce labor unless all other means of checking the convulsions have failed. In such cases, probably, the most satisfactory course, where there is only a slight dilatation of the os, would be to use the method of Krause—i. e., to pass slowly

one or two large rubber catheters, well sterilized, deeply into the uterus. This is easily done, and, above all, causes the least possible irritation to the maternal organism. A point worthy of notice is the rapid dilatation which often occurs during a vapor bath, due, possibly, to the almost complete relaxation; cases are even on record of delivery during the course of such a bath. If, however, labor comes on spontaneously, the best plan would be to shorten its duration as much as possible. Apply the forceps and deliver the child as soon as the necessary conditions are present, but always under deep anæsthesia.

As for venesection, he believes that it is contraindicated in most cases on account of the resulting increased tendency to heart failure, which is already very great. Its only justification would be in the case of a strong plethoric woman with over distention of the right heart. Even here, the author believes, free diaphoresis, with saline subcutaneous injections would be of less danger and of equal value, and would serve the same ends.

Congenital Malarial Fever.

Lindsay Peters (Johns Hopkins Bulletin, June) mentions the case of a child born at term during malarial paroxysm of the mother. After reviewing the literature, the author says that since it is well proved that many varieties of bacteria are able to pass from the maternal to the foetal circulation, it is *prima facie* likely that "a minute organism possessing the active amœboid motility and penetrating power of the malarial parasite, should be able to do so." The attacks recommenced in the spring of 1898, she being at the time pregnant, but again disappeared under treatment, to return on the day of confinement. On the third day the mother had a chill and a temperature of 104 deg. F. An examination of fresh blood specimens the next day showed typical, half grown, tertian malarial organisms. The baby was a healthy boy. Blood from the ear showed no organisms on the first two days. On the fiftieth day after birth the child was seen and found to be sick, pale, unwilling to suck, anæmic, and yellowish. The lower border of the spleen could be felt. The next day, a specimen of blood was pale, watery, and coagulated very slowly. Three malarial parasites of the tertian type found—one small, extra-cellular, pigmented form, and two half grown intracellular forms containing light brown dancing pigment. Quinine removed the anæmia and other symptoms in a few weeks. The child was reported to have "got cold and had fevers" from the second week after birth. In infants well marked

chill is said to be rare, and to be replaced by "cold hands and feet, blue lips and nails, sometimes slight general cyanosis, pallor, drowsiness, and prostration."

Is Trypsin the Glycolytic Ferment of the Pancreas?

Croftan (American Jour. of the Medical Sciences) has investigated the etiology of diabetes. Several series of experiments were carried out to determine, first, the source of the glycolytic ferment in the blood. This was found to reside in the white corpuscles and being soluble in cold physiological salt solution may be considered a "ferment" and not dependent upon cell life. He then proceeded to investigate the relation of this ferment to the pancreas. The author had previously ascertained, while investigating the destructive metabolism of hemoglobin in the formation of bile-pigment, that trypsin was present in considerable quantity in the liver and that reduction of hemoglobin only occurred in the presence of sugar, the latter being destroyed in the process. This led him to compare the glycolytic ferment of the white blood cells with trypsin and a careful series of experiments seemed to show the identity of these two substances. In other words the sugar-reducing ferment of the blood is trypsin, a product of the pancreas. This, if true, gives valuable hints as to therapy; injections of chyle or blood, of leucocyte extracts, of trypsin, or of vegetable glycolytic ferments being theoretically indicated. The injection of trypsin causes thromboses and is otherwise dangerous and the use of the other substances is fraught with certain difficulties which, however, are not insurmountable.

Diphtheria Treated with Antitoxin and Pilocarpin.

E. W. Saunders (St. Louis Cour. of Med.) recommends the use of pilocarpin as an adjuvant to antitoxin. The specific action of the latter remedy is deferred for an interval of from 12 to 36 hours during which the organism remains undefended and is at the mercy of the diphtheria toxin. By administering pilocarpin an active leucocytosis is set up which combats the bacterial process. He advises that the pilocarpin should be continued for several days, except in cases seen after the fifth day when a weak heart makes caution important. Meanwhile the administration of antitoxin should not be neglected. As soon as the diagnosis is made this specific remedy should be given in a sufficiently large dose to neutralize the toxin. In the past seven years he has treated in the neighborhood of 300 cases of this disease in private practice,

and in the Episcopal Orphans' Home, and he has not a single death on record. Some of these cases were treated by one of his assistants, more or less under his own personal supervision. Of course, this does not include some serious cases, in which he has been called in consultation, but only comprises those which have been treated by himself or assistant from the beginning. There have been no special sequelæ in any of these cases. There has been no case of severe nephritis, and only two or three cases of mild paralysis of the palatal muscles. One case showed slight strabismus for a few days.

Treatment of Laryngeal Tuberculosis.

J. Price-Brown (Can. Jour. of Med. and Surg.) mentions the principal methods of local treatment in the various forms of the disease, i. e., those associated with anemia, hyperemia, infiltration, ulceration, necrosis and new formations. In anemia the doctor recommends sprays of stimulating antiseptic volatile substances in a hydrocarbon oil; his favorite is menthol in albolene, 1 to 5% strength. In hyperemia similar sprays are used, but they should be less stimulating. Much difference of opinion exists as to the treatment when there is infiltration. Shurly recommends linear incisions; Lake, removal of the interarytenoid thickening with cutting forceps; and Gougenheim extirpation of the arytenoid cartilages. Chadelle makes submucous injections of creosote, menthol, etc. In ulceration, lactic acid, locally, is the favorite remedy, but it causes much pain. The author first sprays the larynx with cocain and then applies a 25 to 50% solution, increasing it to full strength; no friction is used. Lennox Browne recommends 20% solution of menthol in olive oil and Freudenthal a menthol orthoform emulsion, 1 to 15% of the former and 12½% of the latter. This emulsion is injected, after a prior application of saccharated surrenal for its anesthetic effect. The author recommends menthol in progressively increasing strength, commencing with a weak solution (1% in albolene). Insufflation of powders is not recommended. Others recommend curetting the ulcers, which may be followed by the lactic acid application. The galvanocautery is also considerably used. In necrosis, spray treatment is about all that can be done; sprays of cocain or eucain relieve the pain. Papillomatous growths should be removed. The author has recently used with good results in chronic and tubercular laryngitis, intratracheal injections. Menthol, thymol, creosote and guaiacol in the hydrocarbon oils, in strengths of ½ to 2%, are principally used

for this purpose. One of the immediate results of this treatment is a sense of warmth and glow in the larynx and reaching to the lung, and complete cessation of cough. The antiseptic is brought in immediate contact with the diseased area.

Ichthiol in Tuberculosis.

C. F. Spangler (St. Louis Medical and Surgical Journal) recommends ichthiol in tuberculosis. It is acceptable to the stomach, promotes the functions of digestion, is readily absorbed, and, stimulates constructive metabolism. The principal objections to it are its odor, taste and the eructations which sometimes occur. It is therefore best given in capsules. The plan most generally acceptable has been to begin with a No. 1 empty capsule (filled by the patient) after each meal for the first week, adding another to each dose during the second, and a third to each dose the third week. The dosage is maintained indefinitely, and presents the advantage of attaining the maximum degree of tolerance in the shortest time. If discomfort arises from the eructations the interval between each dose is apportioned to afford ample time for complete appropriation before another is introduced. This is provided for by giving the capsules after breakfast and at bed-hour. During the first week of the treatment little or no appreciable effect is noticeable in the chest symptoms; after that time, however, a gradual impression becomes manifest. The cough paroxysms lessen in intensity and frequency, the expectoration becomes more profuse, and the sputum loses a measure of its density. Proportionately to the amelioration of local symptoms the appetite improves, and there is usually a marked weekly gain in weight. Notwithstanding its exceptional service in the chronic forms of the disease, experience proves it of little value in the acute complications. If, at any time, the progress of the improvement is interrupted by the intervention of a diuretic or pneumonic attack, which, unfortunately, too frequently occurs in this latitude, the ichthiol is suspended until the acute symptoms subside, when it is again resumed. These complications yield most readily to guaiacol carbonate, thiocol, or phenol hypodermically.

Infected Wounds of the Hand.

H. J. Whitacre in the Cincinnati Lancet-Clinic advocates free incision as soon as possible in order to allow of removal of germs in the infected wounds of the hand of which the felon and the palmar abscess are the type. Anesthesia may be obtained in the case of a felon by freezing with ethyl chlorid; a general anesthetic is required in

palmar abscess. Preceding operation the hand and wrist should be scrubbed and after incision drainage should be freely supplied by means of rubber tubes or gauze, connecting the different openings if several have been found necessary. Do not open the tendon sheaths unless they are infected. To prevent reinfection antiseptic agents should be applied continuously. He prefers a one-per-cent solution of aluminum acetate made by dissolving 24 Gm. of alum and 38 Gm. of acetate lead in one liter of water. Next in value are carbolic acid and bichlorid solutions. Those solutions may be applied either by wet compresses covered with gutta percha or oiled silk or as a continuous hot bath. In the former case the dressing should be kept wet and the wounds redressed at least once a day, washing them out with hydrogen peroxid and flushing with an antiseptic solution. The continuous bath is required in the most severe cases. The appearance of the hand after such a bath is not attractive, but leaves the hand in a satisfactory condition. The gaping adhesions can finally be brought together with adhesive strips and sluggish granulations stimulated with balsam of Peru. Passive motion must be commenced early. Cellulitis, shown by red streaking, may sometimes be checked by these continuous wet aluminum acetate dressings.

Ovarian Pregnancy.

John F. Thompson, in American Gynecology describes a case of ovarian pregnancy. The patient was a multipara, aged 32, and the pregnancy occurred in the left ovary. No rupture had taken place previous to the operation. Just inside of the base of the tumor was a small opening on the surface of the ovary with ectropion of the lining of the graafian follicle. The fallopian tube was unobstructed in its movement, freely falling forward when the specimen was raised by grasping the ovary. The fimbrias were entirely free from one another and the tube was patulous. The fetus was found attached to the wall of the ovisac by an umbilical cord 1.5 cm. in length. The fetus itself measured 1.2 cm. in length, not extended. In appearance was exactly similar to a fetus of the same age developing in the uterus. The points which substantiate the claims of this individual case are: The tube is not concerned in the development of the pregnancy; there is no supernumerary tube; the pregnancy undoubtedly did not occur at or near the fimbriated end of the tube, as the sections made from the tube near the fimbriated end showed no evidence that the structure had been the seat of pregnancy; the fimbriated end was found at the time of the operation

to be entirely free from the ovary, so that the case is not one of tubo-ovarian pregnancy; the fimbria ovarica in this case is found in what must be considered its normal place, extending from the end of the tube to the outer end of the ovary; there is no evidence to be derived from the examination of sections of ovarian tissue that the fimbria ovarica has passed up over the surface of the ovary; an examination of more than 100 sections from different parts of the wall of the ovisac shows no cells which can be considered as decidual; there is no trace of decidual tissue to be found in any part of the specimen examined.

Tropical Abscess of the Liver.

Godlee (Medical Press and Circular, July 16, 1902) found perihepatic peritonitis an almost invariable accompaniment. This shuts off the part, preventing at the time of rupture a general peritonitis. It affects oftenest the convex surface, leading to adhesion to the diaphragm and partial dullness in the lower part of the chest, except when the lung is adherent to the pleura and cannot be displaced upward. If the peritonitis occurs on the under surface of the liver the results are much more serious. Escape of all the bile through the wound is not common. It does not necessarily lead to anorexia or indigestion, but causes emaciation, which may be extreme. From the flow in the lymphatics of the diaphragm being upward pleurisy is common. Rupture into the pleura is one of the most dangerous complications, causing rapid effusion and collapse of the lung. Pleural adhesions may save from these grave dangers. Pulmonary abscess consequent on hepatic abscess should be opened without delay on account of the dangers from burrowing and of brain abscess. The thick, slimy, chocolate-colored pus may contain the ameba coil, when fatal hemorrhage occasionally occurs. Some abscesses have a remarkably long period of latency, others are septic from the first and hopeless. The majority of tropical abscesses are single. Imperfect drainage may lead to diagnosis of a second one. The seat of election for operation is the lower axilla, the incision being transverse, parallel with the lower margin or the pleura, the portion of rib that crosses the wound being removed. If the pleura is injured it should be sutured. After opening the diaphragm the liver may be sutured to it and the chest walls, or the parts around the opening may be carefully packed with antiseptic material. Hemorrhage may be stopped by the finger or careful plugging.

Diabetes Insipidus.

Futcher (Johns Hopkins Hospital Reports, x, 197-247, 1902,) has studied five cases, all occurring in men varying in age from 25 to 44 years. He concludes that disease is uncommon in this country—only four cases, or 0.001%, occurring out of a total of 356,637 cases treated at the Johns Hopkins Hospital and Dispensary. Inasmuch as the nitrogenous constituents of the urine are almost entirely dependent on the nature of the food, it is stated that the old classification of cases of diabetes insipidus under the headings of hydruria, azoturia, and anazoturia is no longer tenable. Although border line cases difficult to classify occur, clinically almost all cases come under one or two headings: (a) the primary or idiopathic cases—those in which there is no evident organic basis for the disease, and (b) the secondary or symptomatic cases—those attributable to definite organic changes either of the nervous system or abdominal viscera, to physical disturbances, etc. Although some observers classify those cases in which thirst is the first symptom as an independent disease under the name of primary polydipsia, the evidence in favor of this view at the present time does not seem to be sufficient. Tumors involving the medulla and the floor of the fourth ventricle, cerebral hemorrhages, and basilar meningitis are the commonest organic lesions causing the disease, but cerebral syphilis apparently is the cause of a larger number of cases than is generally supposed—the lesion being most frequently a syphilitic basilar meningitis. Four of the five cases reported by Futcher showed marked cerebral disturbance; one was undoubtedly due to syphilis, two others were probably due to syphilis, and another was probably due to some cerebral lesion. In all five cases thirst appears to have been the first symptom, at least the first symptom to attract attention. In four cases the knee-jerks were exaggerated, in one case they were diminished. Usually there is no marked disturbance in the metabolic functions. Futcher concludes that although the nature of the disease is uncertain, one may say that it is due to some nervous influence causing a vasomotor disturbance of the renal vessels, leading to constant congestion of the kidneys. There is no constant anatomic finding at the necropsy—the most frequent lesion being enlargement and congestion of the kidneys. The prognosis is less favorable in the secondary or symptomatic cases than in the primary or idiopathic cases; the longest duration of the disease in the cases reported was ten years. Unfortunately treatment is very unsatisfactory, and usually fails to afford re-

lief. In the syphilitic cases antileptic treatment at times causes a marked improvement in the general health, as in two of the cases reported, and also occasionally an almost complete cessation of the thirst and polyuria, is in one of the cases; on the other hand, as in another of the cases, it may be of no avail.

Tuberculosis of the Urinary Tract.

Edgar Garceau (Boston Medical and Surgical Journal, July 3) has collected a total of 415 cases of operations on the kidney, including 257 nephrectomies, 42 nephrotomies, 84 nephrotomies followed by nephrectomies, and various nephrectomies complicated by other operations of resections. The total surviving two years or more was 58, or fourteen per cent. The percentage of cases well from within a few months of the operation and, therefore, promising ones, added to the survivals of two years, making a total percentage of 58. The reason the results are not better is that renal tuberculosis is rarely primary in the kidney, and the patient who has been nephrectomized for tuberculosis should never be considered safe for the future, and he must keep himself up to the highest pitch of vigor, and keep down the disease which may be lurking elsewhere. The largest number of cases of nephrectomy was in females, which does not coincide with the autopsy records and the disproportion is remarkable. Morris explains it by saying that the coexistence of renal with vesical tuberculosis, or with disease in some other part of the male genito-urinary organs, renders many men unfit for operation upon the kidney, and he suggests that the greater difficulty of recognizing latent renal tuberculosis in the male may also be responsible. The majority of cases occur in the third and fourth decades of life, and the miliary form is far more common. Tuberculosis of the other organs is mentioned 54 times. The type was chronic in all cases; old foci probably existed in a large number of cases and would vitiate the figures. Morris also says that old foci of tuberculosis are also found in the prostate, testicles, or lungs in cases of kidney tuberculosis. It is seldom a primary disease; direct infection through the urethra is not a common event. The question as to whether the primary seat of origin of tuberculosis is in the kidney or elsewhere is noticed, and from the figure it appears that the kidney is affected primarily oftener in females. There is no doubt that vesicle tuberculosis as a primary disease is most frequent in males. It is possible that many male cases do not survive long enough to allow extension to the kid-

ney, while in the females the kidney is the more common seat. The increasing use of the cystoscope will reveal more in regard to these points in the future than in the past.

A New Surgical Departure in Neuritis.

Drs. Chipault and Le Fur, according to the Medical Press and Circular, have recently inaugurated a new advance in the treatment of a special form of intercostal neuralgia. A man, æt. 48, had for a period of four years suffered excruciating neuralgic pains in the course of the eighth, ninth and tenth intercostal nerves of the right side and around the umbilicus. There were violent crises, which had been proving worse as the case grew older. He had been treated at various hospitals, and heavily dosed with the usual anodynes—even up to eighty centigrams of morphia *per diem*—without any permanent improvement. He had, in consequence, lapsed into a deplorable state of general health, and had frequently contemplated suicide. The crises occurred at intervals varying from a few minutes to several hours. There was also a zone of hyperalgesia corresponding to the distribution of the nerves mentioned. There was no evidence of tabes; the reflexes were rather exaggerated, and there were none of the usual vesical or rectal complication of tabes. The diagnosis arrived at was a "névrite radriculaire"—a neuritis of the roots of the nerves in question, at their origin from the spinal medulla. Accordingly, an incision was made vertically over the sixth and seventh dorsal spinous processes, which had been found by previous experiments on the cadaver to correspond to the level of the origin of the roots of the nerves in question. This was prolonged till room was made for the removal of three of the posterior vertebral arches. The dura mater was then incised; the three nerve roots sought for were fully exposed, and found to emerge from a well-defined and sharply localised area of cicatricial arachnitis. The affected arachnoid was removed, the diseased nerve-roots excised, the dura mater sutured, and the wounded soft parts brought together *secundum artem*. The patient left the hospital thirty-five days after the operation, free from pain. There have been some recurrences of the neuralgic crises since, but not nearly so frequent or so intense as before the operation. The success, although not perfect, has certainly been a very remarkable one; and Drs. Chipault and Le Fur may well be congratulated on having inaugurated a new and brilliant departure in the domain of surgery.

Adiposis Dolorosa.

An interesting case of *adiposis dolorosa*, or *Dercum's disease*, has been placed on record by Dr. E. Angus Johnson (Medical Press and Circular, Aug. 20, 1902). The subject was a female, æt. 32, married thirteen years, but still a nullipara. At the time of her marriage she weighed 7st. 9 lbs. "Eight years ago she noticed that her stomach was getting larger and very tender on pressure [the pain being compared to that of a bruise]. Then the hips, chest, arms and legs got bigger. Pains of a neuralgic nature under the left shoulder, which have been worse since the influenza; also neuralgic pains on crown of head, across the forehead, and particularly over the left temporal region. There are frequently hot flushes of the face, followed by cold, clammy sensations; also giddy sensations, with a feeling as if she is going to fall backwards. Locomotion is difficult, and a very short walk is followed by great breathlessness and palpitation, her nervous equilibrium being upset over most trivial matters. When she 'catches a cold,' the pain in the chest is so severe that she cannot sleep on its account. Standing for any length of time causes severe pain in the ankles and knees [which do not swell]; this also prevents sleep." The face is not affected, and on that account has the curious aspect of looking too small. The thyroid gland, so far as its outlines can be made out, appears to be unaffected. The thoracic and abdominal walls present great deposit of adipose tissue; on the latter "whilst in the recumbent position big folds of fat are produced. This is tender on manipulation or slight squeezing, the pain, as already noted, is likened to that which follows a bruise, the skin bruising on very slightly squeezing it." The temperature and heart's action appear to be normal; pulse 96. The hands and feet appear normal except for a slight fullness of the thenar, hypothernar, and plantar eminences. No muscular wasting can be detected. The headache, vertigo, palpitation and sleeplessness are intensified at menstruation. The *tout ensemble* suggested to Professor Watson, who saw the case in consultation, the happily descriptive epithet of ambulatory lipoma.

The Surgical Treatment of Tuberculous Cervical Adenitis.

J. F. Mitchell, in the Johns Hopkins Hospital Bulletin, July, 1902, states that tuberculous cervical adenitis is primarily a local disease of very frequent occurrence, more often in young persons; in itself not extremely serious and rarely if ever proving fatal. It bears, however, a certain definite relation to tuberculosis of the lung, and

serves as the starting point from which tuberculosis may spread.

The tuberculin test as an aid to diagnosis is positive and harmless.

While recovery may often take place under good hygienic conditions, surgical interference is clearly demanded in most cases.

When surgical treatment is resorted to the operation should be radical in all cases.

Recovery may be predicted in 70 to 80 per cent. of cases so treated. "Tuberculosis of the lungs after complete removal of the glands is comparatively rare.

Tuberculosis of the lungs, unless far advanced, is not a contraindication to operation, the removal of the glands apparently exerting a beneficial influence on the condition of the lungs.

The Microscopic Examination of Conjunctival Discharge.

Edgar S. Thompson (Pediatrics, July 1, 1902). He gives an account of the morphologic characteristics of the bacteria and pus cells commonly found in the conjunctival discharge. The bacteria found in this situation are the gonococcus of Neisser, the diplococcus intracellularis of meningitis, the Klebs-Loeffler bacillus of diphtheria, the bacillus of Weeks, and the staphylococcus in its various varieties. Other more uncommon bacteria found are the diplobacillus of Morax and Axenfeld, the bacillus of Colomiatti, the pneumo-bacillus of Friedlander, the streptococcus, the tubercle bacillus, the colon bacillus, and others. He claims to get much valuable information from simple smear preparations without culture experiments. The writer says that the pus should always be taken from the cul-de-sac after the lower lid is everted. Pus from the edge of the lid should never be taken, as it is apt to contaminate with extraneous bacteria. Smears should be gently made, so as to avoid destroying the relationship between bacteria and pus cells.

The varying elements found are the large pus cells with deeply stained, irregular, sometimes multiple nuclei, and faintly stained cell substance; sometimes we see a large squamous epithelial cell with a small round nucleus. Strings of mucus are also seen. The severer the discharge, the more pus cells do we find and the less mucus, but as the process subsides the mucus becomes more plentiful and the pus cells less.

He details the appearance of the gonococcus—biscuit-shape, etc. The bacillus of Weeks is the commonest bacterium found in the ordinary case of pink-eye. It is a short, thin bacillus, shorter and slightly thinner than the tubercle bacillus, and stains so nearly the same intensity as the

pus cells, usually a very little deeper, but not so deep as the pus nuclei. It is, therefore, not as conspicuous as other more deeply staining bacteria, and the slide must be closely and carefully examined. It occurs between the pus cells and the strings of mucus.

In cases of doubt, of course cultures should be made.

The Pathology and Diagnosis of Tuberculous Otitis Media.

G. V. Grimmer [Archives of Otolaryngology, June, 1902], presents the following conclusions:

1. Advanced tuberculous changes may be present in the mucous membrane of the tympanum and of the tympanic membrane itself without producing visible evidence through the external auditory meatus.

2. The membrana propria of the drum-head offers resistance to tuberculous infiltration, and is only destroyed by a process of erosion. This resistance also accounts for the frequency of multiple perforations in tuberculous cases.

3. Latent tuberculous nasopharyngeal adenoids and all other latent foci must be excluded before deciding that any case of middle-ear tuberculosis was a primary infection.

4. A high percentage, probably sixty-five to seventy, of cases of suppurative otitis media with neighboring bone lesion, in children under five years, are tuberculous; in older persons, not more than sixteen per cent. of similar cases are tuberculous.

5. Intraoperative inoculation of guinea-pigs is a good and reliable method of proving the presence or absence of tuberculosis in granulations from the middle ear. Reliable proofs may also be obtained by examining microscopically such granulations or even an enlarged mastoid gland or nasopharyngeal adenoids when present.

6. In cases of suppurative otitis media, the absence of ear pain, early and extensive destruction of bone, early facial paralysis, multiple perforations, pale flabby granulations with caseous points in the meatus, about a mastoid sinus, and in the mastoid antrum, and an enlarged mastoid gland, point strongly to the disease being tuberculous.

7. The detection of a bare bone with a probe through the meatus, the character of the discharge, facial paralysis, and extensive destruction of bone appearing as a late symptom, are of doubtful value in arriving at a diagnosis, while the presence of cholesteatomatous masses is positively opposed to tubercles being present.

The Annual Variation of Puerperal Fever Compared With That of Some Diseases.

A. L. Galabin, in the London Lancet, June 14, 1902, presents two diagrams, the annual variations, recorded for about ten years, of the following five diseases: Puerperal fever, erysipelas, general septicemia and pyemia, scarlet fever and acute rheumatism. Each of these diagrams contains, furthermore, a curve representing the annual rainfall in inches at Greenwich. There appears a distinct association of dry seasons with maximum mortalities of these five diseases. The meteorological character of the season may increase the prevalence of disease either by promoting the growth of pathogenic germs outside the body or by facilitating their diffusion or conveyance, most probably in the last mentioned way by aiding dissemination of microbes in the form of dust.

In order to test whether this effect of drought is immediate and direct he has constructed a third diagram showing the weekly variations of the five diseases in London for the year 1893, in which four of them showed a high maximum of mortality. The author concludes from this diagram that the excessive mortality of puerperal fever, erysipelas and rheumatic fever does not occur in the dry period, as is the case with scarlet fever, but from two to four weeks after a heavy rainfall.

The curve of mortality of puerperal fever, comprising ten years, shows a decided downward tendency, like that of the other four diseases. As regards the curve of erysipelas, its most marked feature is its close resemblance, almost amounting to identity, to the curve of puerperal fever.

He further says antiseptic midwifery is still required in England and Wales, outside of London. The relation of fatal puerperal fever to erysipelas is closer than has been generally supposed, and much closer than that of either disease to septicemia and pyemia generally. A consequence of this seems to be that an anti-streptococcic serum derived from erysipelas would be more likely to be useful in puerperal fever than one derived from any other source of streptococci except puerperal fever itself.

"Pneumonia Blouses."

The Medical Press and Circular, Aug. 20, 1902, says that there is nothing more difficult to ascertain aright than the effect of dress on the health of women. If pride is never hurt, then surely fashion never fatigues and dress is faultless of disease. But at the dictates of fashion an important experiment has been conducted on a large scale this summer. For many generations

the demands of evening dress have necessitated free exposure of the feminine thorax, but during recent months adequate covering of the chest of most women has been conspicuous by its absence even during morning shopping and at afternoon garden parties. And this custom has prevailed when the manly bosom has sought protection in wraps and overcoats. "Open-air" treatment, it would appear, is to have a wider significance than we have hitherto thought. We are quickly learning to shake ourselves free from ancient medical prejudices and to discard old-time hygienic considerations. Contempt for much of the so-called sanitary counsels of the past has given rise to unwarranted and reckless indulgencies in "natural" methods and "savage" customs. The question now awaiting answer is how far such "exposures are to be considered detrimental to health. In short, do "pneumonia blouses" merit their name? Experiments have shown that the direct action of cold upon the skin is capable of producing extensive irritative changes. Ice applied to the thorax or abdomen will produce marked congestion of the bronchial mucous membrane. Exposure to cold and draughts after violent exercise or when the skin is acting freely is said to be a fruitful cause of bronchitis and lung trouble. But can such evils occur to a woman arrayed in a dainty, low-cut, fashionable blouse? We trust some of our readers may be able to throw light on this interesting pathological problem.

Ichthyol in Chronic Bronchitis in Children.

Walter B. Jennings (St. Louis Medical and Surgical Journal) uses the drug in the common form of bronchitis in children, which so often follows measles, whooping-cough, and acute infectious diseases in general. Dr. Jennings gives the histories of eight cases demonstrating the good effects of ichthyol in the above named conditions. It was administered in the following combination :

Ichthyol,	gr. xxxij.
Glycerini,	
Spt. aurantii, ʒʒ	ʒss.
Aquæ, ad.	ʒij.

He gives the following conclusions : (1) The first dose often causes nausea and vomiting, but later the child grows inured to the taste of ichthyol. (2) Children under one year of age do not take ichthyol well. (3) To avoid the unpleasant effects of ichthyol it should be given after meals. (4) Increasing doses are not necessary for good results in children.

Foreign Bodies in the Lungs.

T. A. Korteweg [Annals of Surgery, July, 1902,] concludes as to foreign bodies in the lungs as follows : Those bodies which enter through the larynx, if they do not at once cause suffocation, may sometimes be borne easily enough for a short or a considerably long time. If smooth and round, or of regular outline, they are commonly coughed out or maybe removed by tracheotomy. If the bodies are of rugged outline, even when retained for some time and until suppurating processes have occurred, after removal by tracheotomy the prognosis becomes as a rule good. If, however, the body, no matter what its kind may be remains in the lungs indefinitely, the final result is necessarily the death of the patient. The same results ensue if the foreign body has been introduced into the viscus by force from without, such as in the case of gunshot wounds. The pathological process incident upon all these cases is briefly this : Around the foreign body follows decubitis and behind it necessarily retention of mucus. The ensuing inflammation and swelling only make this situation worse. In some cases the symptoms of ulceration prevail while in others those of retained pus and abscess-formation are predominant. The mucus retained by the blocking of the bronchi by the body, and the damage by the body to the delicate lung-structure render the dangers of infection more and more definite. The bronchus closed by the body distends partly by the force of the actual damming back of the mucus, partly by the efforts at coughing always chronic and violent, and partly by the negative pressure of the surrounding active lung. The condition within the lung is now such as to provide lobar pneumonia. As soon as this viscus circle of retention, infection, dilatation and inflammation occurs it is hopeless to try to stop the process. In this stage will be seen the expectoration, fever, physical signs and symptoms of a gangrene of the lungs which sooner or later has a fatal termination.

The Relation of the Nose to the Reproductive Organs.

Cox [Brooklyn Medical Journal, July 1902], notes the relation which the nose bears to the reproductive organs, and cites several examples, viz. : The frequent occurrence of hemorrhage from the nose at the time of puberty and during early adolescence. The engorgement of the turbinates during the menstrual epoch, which may seriously embarrass nasal respiration, and that even in women who at all other times have unobstructed nostrils. The so-called "menstrual headache" is often due

to a swollen middle turbinate pressing on the septum, and can be relieved by local applications to the congested turbinates. Nasal reflexes during sexual excitement, such as congestion and sneezing, are frequent. As an example of this the author cites the case of a man in whom the consummation of the sexual act always produced a severe fit of sneezing and occlusion of the nostrils. Two cases of severe priapism, each of several days' duration, are reported by Hobbs, which had completely resisted all kinds of treatment, but which yielded promptly to the application of cocaine to the nasal turbinate bodies. In one case there was no intimation of a return; in the other, recurrence took place a few times, but only to a slight degree. Nasal disease is also frequently affected by menstruation, uterine or ovarian disorders, and the menopause. Trousseau noted the fact that the fetor of ozena is most pronounced during the menstrual period. It is also known that the fetor and crust formation are markedly mitigated after the menopause. The relief of painful menstruation by intra-nasal applications has been reported by Schiff, Fleis and others. Schiff proved that the pain of dysmenorrhea was relieved promptly in thirty-four out of thirty-seven cases by the application of twenty-per cent. cocaine solution to the "genital spots" of the nose. Some cases he observed for months. Hypogastric pain was relieved by cocainizing the turbinate, and sacral pain by application to the tuberculum septi. Chrobak, in seventeen cases, cauterized the genital spots during the menstrual interval with trichloroacetic acid or electrolysis, with no return of the dysmenorrhea in twelve cases, one being under observation for two and a half years. He noted, in two cases, complaint of hypogastric pain immediately upon application of the cocaine plug. A lack of development of the erectile tissue of the nose has been noted in animals which had been castrated.

Intussusception.

Huber and Erdmann in the Archives of Pediatrics, gives a review of the salient features of this condition. The principal symptoms are sudden abdominal pain, vomiting, the passage with much straining of a stool containing mucus, blood, and scanty liquid feces, and the presence of a tumor though one or more of these symptoms may be missing. Of the three varieties, the enteric is the rarest; and here no tumor can be made out, as a rule. The colic form is less common than the ileocecal, which is the type most commonly seen.

The vomiting which usually sets in early

is persistent, but fecal vomiting is rare in infancy. The character of the rectal discharge is important, and the presence of blood and bloody mucus resembling currant jelly is always suspicious, in the absence of a history of polyps or dysentery. Where a tumor cannot be felt by abdominal or rectal examination alone, conjoined manipulation may reveal its presence.

Two methods of treatment are advocated to-day: injection and operative interference. At present the tendency is to limit the employment of injections to the early stages, twelve to twenty-four hours from onset. They should be given without anesthesia. Baby placed on belly, hips elevated, warm water is then to be poured into the rectum without using too much pressure, the water to be held in the bowel by pressure on the anus from without. If this method is not successful the authors consider that surgical intervention should be had at once.

Erdmann considers that enemata should not be used at all in cases of over twelve hours' standing.

The operation is not difficult, excision of the gut being rarely required except in long-standing cases.

The proximal end of the gut should never be pulled in attempting the reduction, as this procedure is often productive of tears of the intestine. Reduction is to be produced by pressure upon the apex of the mass through the gut at the distal end. Should adhesions between entering and receiving gut prevent reduction, they may usually be broken down by the passing of a blunt instrument between the two portions.

Cesarian Section--Fritsch's Fundal Incision.

J. M. Munro Kerr [Journ. of Obstet. and Gynæc. for the Brit. Empire, July, 1902,] states that in 1897 Fritsch first recommended the transverse fundal incision, because of the ease with which the child can be extracted from the gravid uterus. The advantages claimed by Fritsch and substantiated by the writer are: [a] The abdomen is opened into higher up, and so there is less risk of subsequent hernia; [b] by pulling the fundus well forward, the escape of blood and liquor amnii into the abdominal cavity can be better prevented; [c] the child can be more easily extracted; [d] the placenta is less frequently cut down upon; [e] there is less bleeding; [f] there is greater diminution of the wound, and less stitching is required. The objections urged against the operation are: [1] The incision makes adhesions to the bowel more liable, which may interfere with the involution of the uterus, and that discomfort

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from dragging on the abdominal wall will follow; [2] the uterus may become fixed to the abdominal wall three to five inches above the symphysis; [3] in case of any infection of the uterus general peritonitis is more liable to follow. This is not so great with the longitudinal incision, for it becomes shut off from the peritoneum by adhesion with the anterior abdominal wall. The danger of rupture of the uterus in a subsequent pregnancy is still a matter on which one can not speak with any assurance, and certainly one can not yet compare the danger of rupture after a longitudinal with the danger after a transverse fundal incision.

The Common Error in Treating Fractures of the Lower End of the Radius.

Roberts, in the Penn. Med. Jour., mentions the necessity of using force in reducing fractures of the lower part of the forearm with backward displacement of the radius. The force required varies, but, in general, it is about as much as is needed to fracture the tibia and fibula of an infant with bow legs. One should not be satisfied until there is a complete reduction, so that the palmar surface of the lower fourth of the radius is concave, while the dorsal surface is flat. Reduction may be made by traction and counter-traction, by pressure upon the back of the lower fragment, accompanied by the sudden flexion of the wrist; by extreme dorsal extension, followed by extreme flexion, or the knee may be used as a fulcrum, across which to bend the broken bone, or any other efficient method adopted. By quickness and great force reduction may often be accomplished without anesthesia, if the fracture is recent, otherwise general anesthesia is desirable. With correct reduction there is little tendency to displacement without retentive apparatus; but a narrow straight splint from the middle of the forearm to the middle of the metacarpus, or a convex palmar splint, together with a wristlet of adhesive plaster, three or four inches wide, is advisable.

The Bacteriology of Vaccine and Variola.

W. W. Stainthorpe (British Medical Journal, July 12, 1902) quotes Wasieleski's arguments for the protozoan view as follows:

1. In their characteristic form the parasites appear exclusively in vaccinia and variola; (2) they appear constantly after vaccination of the cornea; (3) when the inoculation is performed with material other than vaccine they are not forthcoming; (4) they have specific properties; (5) they exercise a special influence on the growth and modification of epithelium.

The writer proceeds to consider how far these claims can be borne out by the results of his own investigations and a comparison of the works of others. A point on which he lays some little stress in his own work is that vaccine material, after being transmitted through more than forty rabbits' corneas in succession, was shown to produce vaccinia in the calf, the animal afterwards proving insusceptible to ordinary vaccination. Chickens were also successfully vaccinated with material of similar origin.

His conclusions are as follows:

1. "Vaccine bodies" are exclusively characteristic of vaccinia and variola, being absent both from normal skin and in other lesions; the so-called vaccine bacteria are merely saprophytes of no etiologic significance, as is proved by the activity of bacteria-free lymph.
2. The "vaccine bodies" are to be found invariably in rabbits' corneas properly inoculated with active lymph.
3. These same bodies do not make their appearance in rabbits' corneas under any other circumstances.
4. They are not leucocytes or disintegration products of leucocytes.
5. Their supposed origin from the nuclei of epithelial cells is disproved by (a) their making their appearance in perfectly normal cells, (b) their presence in cells during mitotic division, and (c) the position of the smallest "vaccine bodies" at the periphery of the cells far away from the nucleus.
6. Their origin from cell protoplasm as the result of a specifically toxic action of the vaccine stimulus is capable neither of demonstration nor of exact refutation, but is extremely improbable because (a) the exciting cause of vaccinia cannot pass through a filter, and hence there is no reason to suppose that it is of exceptionally small dimensions; (b) the vaccine agent can make its appearance in normal cells engaged in mitosis, the protoplasm of which presents no appearance of undergoing degeneration through the action of a toxic agent; (c) to such a postulated toxic agent no parallel can be found; (d) the rapidity of the characteristic changes which the tissues undergo in vaccinia is not suggestive of a degenerative process; (e) the occurrence of the characteristic cell-inclusions is not comparable to any known degenerative process; (f) the inactive filtrate of vaccine lymph produces no toxic action in the epithelium.
7. The size, shape, structure, and mode of division and distribution of the "vaccine bodies" are all in favor of their being cell parasites.
8. The fact that vaccine can retain its

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Summer Complaint

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activity after being transmitted for forty-six generations through the rabbit's cornea shows that the vaccine agent can undergo active proliferation in that site.

9. Since at the site of inoculation (in such experiments as the last mentioned) it is not possible, either microscopically or bacteriologically, to demonstrate the presence of micro-organisms other than the "vaccine bodies;" and whereas these latter constantly occur, even to the forty-eighth generation, "the assumption of Guarnieri that the vaccine bodies are actually the exciting cause of vaccinia must be regarded as highly probable."

Opium Dangerous in Pneumonia.

Gairdner in the Glasgow Medical Journal, says: I regard opium as a drug of extreme danger in pneumonia. I am aware that men of great eminence have taught otherwise. But, in so representing the case I am not advocating any theory, but rather am dealing with facts which I know to be true, and which, if true, are such as ought to be in the mind of every practitioner. I have repeatedly seen what can only be regarded as poisonous effects from very moderate doses of opium in certain stages of pneumonia; and (especially toward the crisis) have learned to dread it more than almost any other drug. One case of this kind occurred some years ago in the Western Infirmary, and might well have been published at the time, by way of caution. had I not been anxious to spare the feelings of my excellent assistant, who (if I were to name him now) would be recognized by every Glasgow student of that time as one of the best men in the profession, whose premature death, some years later, was the cause of universal and deep regret. The case in question was this: A man in the prime of life, and otherwise quite sound, had acute pneumonia of the lower lobe of one lung, which was running an average course, up to (I think) about the sixth or seventh day from the rigor. I had left him in a fairly good condition, but with considerable pain, which increased during the night. Next morning he was cyanotic, with slow intermittent breathing, and a very feeble, unsatisfactory pulse. His pupils were somewhat contracted. "Has he had any opium?" I immediately asked. "Yes; one-sixth of a grain of morphia, hypodermically injected, for the pain." The whole scene was such as, I am sure, will never be forgotten by those who witnessed it. My poor assistant was almost thunder-struck, but there was no time to be lost; and, by the usual means, we just managed to pull the patient through a most perilous

crisis, after which he recovered without any relapse or any further incident. Now, this is a fact to be related, apart from all hypothesis. And yet it is not at all difficult to find a legitimate theory to fit in with, and account for, the fact. In pneumonia, far more than in pleurisy, more even than in bronchitis, the safety of the patient depends upon the respiratory nerve-centers being kept, as it were, wide-awake. The greatly accelerated breathing—"accelerated without being laborious," as I used to point out as a rule—is practically at once the index of the danger, and the means by which Nature compensates for the restricted area of lung within which the air can meet the circulating blood. If then, when the respirations are 60, or even 50 or less in the minute, the respiratory nerve centers are sent to sleep by a potent narcotic, is it not obvious that the influence exerted at a critical time must be unfavorable? But opium is, of all narcotics, the one that tells most rapidly on the respiratory nerve centers, and thereby not only on the reflexes which are concerned in what I have constantly termed the "scavenger action" of the bronchial tubes, due to their circular muscles. In the above case (as in others I have witnessed) all this essential machinery, working at high pressure to keep the patient in life, is brought to a comparative standstill, while the disease is still proceeding, or at least not retreating. Can we wonder at the result? I give this theory tentatively, not dogmatically; but of the facts I am absolutely sure, as above stated. If strychnine and the older remedy, antimony (as to which I must even now speak with caution), are good for anything in these circumstances, it is because they tend to keep these respiratory reflexes in full operation, which even a moderate dose of opium would paralyze or abolish.

Abdominal Route for Approaching Tumors.

Robert Abbe, (Annals of Surgery, Aug. 7, 1902) says that first, operative method for cancer in different parts of the rectum must still be elective; there is no one method that applies to all. The perineal route is still the most available for very limited and very low down growths. The Kraske sacral method is available for a moderate number of growths which exhibit slight malignancy as to infiltration, and are not more than a short finger length within the anus. But the abdominal method combined with those just mentioned more nearly meets the present attitude of surgery in seeking as wide and thorough extirpation as possible for malignant growths.

Second, the artificial inguinal anus had

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best always be made at the time of operation, and need not be done beforehand.

Third, when the section of the rectum is made well up to the sigmoid, the ends of the severed gut should be inverted by a stout silk purse-string suture for more perfect cleanliness and handling.

The question of disposing of the upper stump is one that may well appeal for solution. Whether to put it in on a severe stretch and attempt to bring it into a perineal or sacral wound, or to make at once a lateral inguinal colostomy, is a question. The writer's argument is for the latter for the following reasons:

1. In the combined method it settles at once all uncertainty and delay by having it brought out of an inguinal cut before the patient leaves the Trendelenburg position, thus leaving the operator free to confine his whole thought to most thorough enucleation of the cancerous rectum.

2. It removes the anal discharges forever from the pelvis, and thus takes away one source of renewed irritation of any remaining cells of disease.

3. If the base of the bladder proves to be involved in the complete operation and a possible leakage occurs, the danger of mixed urinary and fecal contamination are obviated.

4. The results of newly established artificial ani in perineum or sacrum are such that continuence of flatus and feces cannot usually be hoped for, even to as great an extent as in an inguinal colostomy, therefore, inasmuch as a T bandage or napkin will usually have to be worn, the inguinal has no disadvantage.

5. When then the operator begins with the idea of turning the sigmoid colon end up into the groin permanently, he is much freer to dissect the highest part of the rectum and lower sigmoid with the hemorrhoidal vessels, and then clean out all infected lymphatics from the pelvis, ab initio.

The operation as a whole is thereby simplified and abbreviated, as well as made more thorough.

6. The great majority of cases with return of disease ultimately require artificial anus, and it should be anticipated in all by this preparation.

An Unusually Large Pyosalpinx.

May Thorne reports this case in the *British Medical Journal* of July, 1902: On opening the abdomen the very hypertrophied bladder presented in the lower part of the wound lying in thick folds. The mass on the right side just below the liver was somewhat of a kidney shape, and attached to the right side of the uterus by the very thickened and varicose Fallopian

tube, and on following it down it was found to be continuous with the pelvic mass. There were a few thin adhesions above to intestine, which were readily broken down, but the lower mass was firmly adherent to the floor of the pelvis. On entering a trocar and cannula thin non-offensive pus came away; 35 ounces were caught and some 10 ounces or so lost. The right tube was tied off near the uterus and the upper mass lifted out. The left ovary and tube were densely adherent to the left side and front of the pelvic mass. The tube here was very much thickened by chronic inflammation. This was also tied and cut. The pelvic part of the tumor took a long time to remove, it was deep in the pelvis, and very difficult to peel off from the peritoneum of the lowest extremity of the pouch of Douglas.

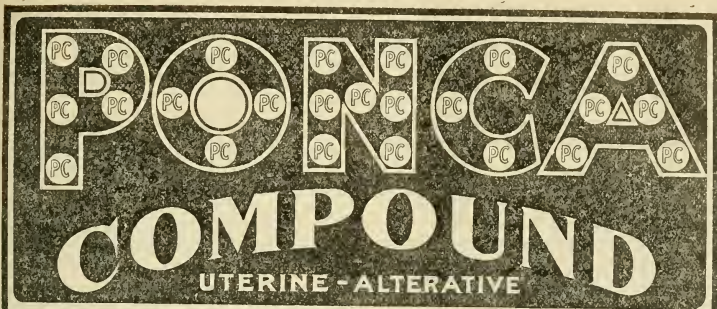
There was very little bleeding throughout the operation. The pelvis was sponged out thoroughly with sale solution. A double strip of iodoform gauze was pushed to the bottom of the pouch of Douglas, and left as a drain for twenty-four hours. The wound was closed in three layers.

The specimen consisted of the largely dilated right Fallopian tube, which measured when in situ about 10 inches from above down, and about 12 inches in circumference in its largest part; the right ovary, and the left very thickened tube and ovary. The left tube was firmly closed by dense adhesions. The wall of the tumor was smooth, except where the adhesions had been torn off. No ulceration of any kind was seen in the interior.

Both ovaries were large and soft, the right ovarian riddled with cysts, and no true ovarian tissue left. The left ovary was bound up in adhesions, which were dense and thick. The patient bore the operation well, and after 48 hours was able to pass her water naturally. She made an excellent recovery.

Local Variations in the Mortality from Summer Diarrhea.

Henry Dwight Chapin (*Archives of Pediatrics*, July, 1902) says that it is generally believed that the cause of the high infant mortality during the summer months is the high bacterial content of the milk. This may be true in part, but there must be some other factors at work. New York City draws its milk supply from an area covering half of the state. If the mortality depended on an infected milk supply, New York shows it especially because its milk is much older than that used in the country districts. But it is frequently the case that a large number of deaths in the country is contrasted with a small number of deaths in the city and vice versa. There are large



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numbers of bacteria in milk during all seasons of the year, so that mere numbers can play but a small part. Souring is the most common bacterial change in milk, and such milk is not necessarily unwholesome for adults, but it forms exceedingly tough curds under the action of rennet in the stomach. During the months of July and August, milk is particularly liable to undergo a gassy fermentation, making the curd spongy and appearing like unbaked bread dough. The variety of fermentation in which the proteids of the milk are attacked is much less common. It is found that the mortality rate does not correspond to the changes in the temperature nor to drouth or rainfall. It is conceded by all that the intense poisoning cases of summer diarrheas are the result of putrefactive changes in the intestinal contents. The great source of putrefactive bacteria is the soil which contains much decomposing organic matter. From this we would expect the amount of dust flying in the air to have some relation to the milk infection. To uphold this view the following coincidence is related: In 1901 the Borough of Manhattan was torn up from one end to the other for the purpose of building subways, sewers, etc. This made the streets very dirty and dusty. At this time there was an unusually small number of deaths from diarrheal disease over the remainder of the state, but the mortality from this cause in the city, having steadily declined, suddenly increased 58 per cent. when the streets were torn up. In attempting to prevent diarrheal diseases in summer attention must be paid to local conditions as well as to the milk supplies.

Dilatation of the Heart in Children.

Eustace Smith, in the Practitioner, Vol. LXVIII, holds that cardiac dilatation to a moderate extent is far from uncommon in early life; indeed, in childhood the heart may be said to dilate with ease. The dilatation may be found out apart from any valvular affection. It is due to blood pressure in a flabby, ill-nourished or degenerate heart, and may occur without any resistance to the passage of blood from the heart. Acute infections, such as broncho-pneumonia, diphtheria and acute rheumatism are particularly liable to cause this. In any such case of acute disease, where the dilatation is rapid, a recumbent position should be enforced, and on no pretense should the patient be allowed to lift his head from the pillow. The diet should be regulated so that those foods which tend to ferment and fill the stomach with wind should be forbidden. The patient should be fed with milk, custard, yolk of eggs, etc. In the matter of drugs, if the case be

a rheumatic one, and sodium salicylate is taken, it is well to combine with it 5 to 10 grains of iron ammonio-citrate. Strichnine in full doses is very valuable, as well as alcohol.

Liver Abscess and Malaria.

James A. Hislop (Indian Medical Record) states that, in his experience in Assam, where dysentery is so common, cases of liver abscess are extremely rare. In three years, working among nearly 9,000 people, he has known only two cases of liver abscess. These patients had not suffered from dysentery within three years preceeding the development of the abscess, and the latter could not thus have been a sequel to dysentery. Hislop thinks the dysentery of Assam does not tend to the formation of abscess formation, as it appears to do in other localities. Assam has a reputedly malarious climate, and in the two cases already mentioned the writer thinks that malaria was the sole cause of the abscess, while the predisposing factor was a drinking bout. He agrees with Sen, who says in his "Thesis on Tropical Abscess of the Liver": "Of all the cases of liver abscess in Bengal, by far the majority are traceable ultimately to malaria. Cases of liver abscess from pure malaria are generally associated with enlargement of the spleen. In this country drinking, combined with malaria, is the main cause of suppuration in about 80 per cent. of liver abscess cases."

Treatment of "Growing Pains" by Aspirin.

J. A. Hale, in *Pediatrics*, follows the most recent opinions as to the rheumatic nature of so-called "growing pains." He has found salicylic acid to be efficient, but often needed in doses that produced distict toxic symptoms. Salicylate of sodium is objectionable for the same reason, but to a less degree. Both drugs are decidedly irritant to the stomach. Of the newer substitutes for these drugs aspirin has given very satisfactory results, even superior to those of salophen, which is very much better tolerated by the stomach than either salicylic acid or its sodium salt. It undergoes little or no change in the stomach, but is decomposed in the small intestines, liberating the salicylic acid in a nascent state, and leaving the acetic acid to combine with alkalies present to form the beneficial compounds of sodium and potassium acetate.

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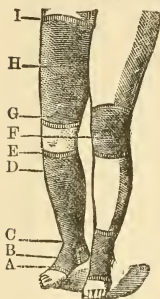


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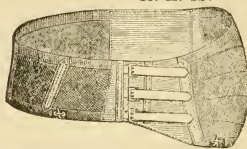
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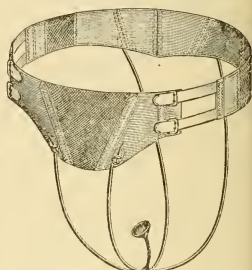
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A deep and general interest is attached to all knowledge pertaining to the treatment of common diseases of the uterus, to which women are subject, and a vast literature is the outcome of this profound and focussed interest. We live to-day in an age of transition—a period of change. A great many of the former theories in medicine are fast passing away. New medicines are made, achieve a short-lived success, and then pass on to obscurity. This is true most especially in medicines for gynecological diseases. Of the newer remedies it is hard indeed to get one that may be depended upon for long. They soon lose their reputation and potency and are relegated to the past.

We know that all diseases of the womb have not the same etiology nor the same pathology, therefore they should not all have the same treatment. Far too often the general practitioner groups all these diseases together as one and gives the routine treatment. It is not enough to give anodyne medicines for dysmenorrhea no more than it is sufficient to treat alike all forms of dysmenorrhea.

The operation of curettement has a most

important place in these conditions, but like other remedial agencies it has its limitation. When we curette the uterus we rid it of a pathologically obnoxious lining membrane, and afford a normal membrane the opportunity to be formed.

The healthy woman with normal genitalia menstruates regularly and painlessly once a month from puberty to the "turn" of life, except that this regularity is interrupted by pregnancy and afterwards by lactation. Any departure from this rule constitutes an abnormality. Amenorrhea is less frequently met with than dysmenorrhea and irregular menstruation. The present age of transition has brought forth what is popularly known as the "new woman," and she has brought with her new ideas and practices which in very many cases retard growth and the natural process necessary for perfect health. For leaving the old landmarks, she has to suffer.

The most generally useful medicine in the conditions of amenorrhea, dysmenorrhea, irregular, scanty and fetid menstruation, in my judgment, is a preparation of the Martin H. Smith Company of New York, known as Ergoapiol (Smith). In the female ward of the Lincoln Hospital, Durham, N. C., I have used this medicine very extensively, and it has not only never failed to benefit and cure, but I know no

*By Charles H. Shepard, M. D., Physician to Lincoln Hospital, Durham, N. C.

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remedy with which I could replace it were I deprived of it. Its efficacy may be tested by any physician who properly tries it. I mention a few cases with short description of each, in which it has given the most signal benefit in my hands.

Ergoapiol (Smith) is put up as a small capsule, and is made up of a special form of apiol which is of the very highest quality. Combined with this are some other most valuable hemagogues and they all go to make a fine preparation. It seems to be a scientific pharmaceutical preparation, non-toxic, tonic, as well as emmenagogue. What I have to say of this preparation is based entirely upon clinical experience, and I feel safe in saying that it will bear a clinical test whenever properly administered.

REPORT OF CASES.

No. 1. Mrs. F. was admitted to hospital September 15, 1901; married; no children, though she had been married four years. Had not menstruated for seven years. Womb had been curetted several times; suffered from leucorrhea; pains in right and left iliac regions continuous. Examination showed a very small os, but generative organs were otherwise found to be normal. Another curettement failed to bring on the menses. I then prescribed Ergoapiol (Smith) to be taken one globule three times a day, and afterwards increase to one globule four times a day. After seven days of this treatment she complained of a general feeling of stiffness in her limbs, gaping and a feeling of malaise. The following morning she found to her delightful surprise that she was menstruating for the first time in seven years. At that time the flow was somewhat scanty, but the treatment was continued through three periods. Each succeeding period was more nearly normal than the one that preceded it. Now her functions are regular and I know no reason why she may not become pregnant.

Case No. 2. Mrs. S. complained of a continuous, dull, dragging pain, situated in

the region of the iliac fossa of the right side. Menstruation irregular, scanty, fetid. Married six years; had never been pregnant. Excessive leucorrhea, though otherwise she was perfectly normal. Her weight was 140 pounds. Her condition, and the suffering, both physical and mental, which it occasioned her, was rapidly undermining her health. She was becoming emaciated, appetite of no consequence, general weakness. She considered her condition "hopeless." Cardiac weakness, of which she was a victim, contra-indicated curettement—which usually cures "whites" and allows the formation of a healthy lining membrane. Ergoapiol (Smith) was prescribed for her, one capsule three times a day. In conjunction with this I gave tonic medicines. After six weeks' use of this remedy, the woman said she was "feeling so good" that she did not need any further treatment. She had increased in weight and her appetite had become all she could wish. The menstrual flow was increased, and now, five periods having elapsed from the time treatment was instituted, her monthly flow has failed to appear. She does not expect its return for some time—supposing herself pregnant.

No. 3. Miss S. suffered severe pain each month beginning a day before the flow came on. The flow was a thick, clotted mass, consisting of membrane and the menstrual blood matted together. She had suffered from puberty, and the suffering became more intense as the years passed on. She was 19 years of age, stout, of healthy parentage. Admitted to Lincoln Hospital January 15, 1902. She declined an operation. I afterwards prescribed Ergoapiol (Smith) and have continued it for one month. Her next menstruation was free and easy; painless and regular. I doubt not that keeping up this treatment up to another period she will be entirely rid of the hitherto troublesome condition.

No. 4. Miss W. Tubercular history. Menstruation very irregular, sometimes



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three, sometimes five weeks between periods; very painful; scanty. I prescribed Ergoapiol (Smith) one capsule four times a day beginning one week before the menstrual period and continued a week after the period. As a result of this treatment the patient feels a great deal better in her general health; her monthly flow has been rendered painless and increased in quantity. Ergoapiol has a tonic action upon the muscular fibers of the womb. Its effect is not transitory but lasting. This superior preparation is decidedly tonic.

No. 5. Mrs. D. A victim of endometritis. Pain continues between periods and is aggravated at periods. Leucorrhea was very pronounced; pains in the back; "hot flushes"; vertigo, headache. Patient would not allow an operation; highly sensitive. Several preparations were tried, but none gave relief until Ergoapiol (Smith) was used. It has entirely relieved the patient, and she is now loudly singing its praises. In this case treatment was kept up for ten weeks.

Ergoapiol has never failed in my hands. It is not possible that it can cure obstructive dysmenorrhea, but with that exception it is indicated in all the other diseases of the womb where a tonic and sedative action is the requirement.

Case No. 6. Mrs. D., widow; aged 33; had three children; youngest 10 years of age. She had suffered all her menstrual life severe pains in the pelvis at each period; had to keep in bed a week or more each month; paroxysms of pain were followed by a flow of the "whites"; no anemia; womb found to be flabby and relaxed; pains extended down thighs posteriorly. Had been treated for many years by various physicians of note, but had received only temporary benefit.

Ergoapiol [Smith] was given her, one capsule three times a day, and increased at the time of the flow to four a day. After three months of this treatment her menstrual function became regular, and being entirely well now, she feels that life, after all, is worth living.

I could prolong this list indefinitely with records of cases that have been entirely relieved of these conditions, and I shall be pleased to furnish any information desired as to Ergoapiol [Smith] and its use.

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Neurilla should be given in teaspoonful doses every three or four hours in all fevers, as it relieves nerve-tension and conserves the vitality and strength of the patients.

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One needs but to review the physiologic activities of the remedies recommended as tonics and reconstructives to realize the fact that practically all of them have some secondary effects which detract from their clinical value. It may be that they irritate the stomach and thereby excite repulsion on the part of the patient or even induce nausea and vomiting; some of them are astringent, others primarily stimulating but secondarily depressing—and so on through the entire category of remedies, objections more or less serious may be found. It is, therefore, a matter of great importance to employ a remedy which is not only free from deleterious by- and after-effects, but which adapts itself to use as routine remedy in the many and diverse conditions that call for tonic and reconstructive medication.

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effects are not imparted to the system until the intestinal tract is reached where the tannic acid is slowly evolved and its astringent properties exerted exclusively upon the entire intestinal tract from the duodenum to the colon. Protan is of especial advantage in the treatment of children's diseases peculiar to the summer season.

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Summer Diarrheas of Children and Their Treatment.*

The importance of these demand a separate consideration. Three forms more or less distinct can be recognized, viz.: acute dyspeptic diarrhœa, cholera infantum, and acute enterocolitis.

Acute Dyspeptic Diarrhœa.—This disease is chiefly due to errors in diet, which do not necessarily consist in the substitution of unnatural foods for the mother's milk. The mother's milk may be altered in quantity by emotional causes, by improper food and improper hygiene. Or it may be caused by over-frequent nursing. More often, however, it is caused by the ingestion of unnatural foods.

There are also pre-disposing influences which facilitate the action of the exciting causes. These are especially dentition and the extreme heat of summer.

The prognosis of the aforesaid disease among the better classes is commonly favorable, but among the weak, puny and half starved children of our lower east side large numbers perish, especially during the summer months.

The old-time treatment in these cases was a primary purge, calcined magnesia, or castor oil. After the purge bismuth sub-nitrate or prepared chalk was given. Since the introduction of Glyco-Thymoline (Kress) the above mentioned methods have been cast aside. A very good and effective prescription which has given me most splendid results in these kind of cases, in conjunction with a carefully restricted diet, is:

R	
Bismuth Sub-nitrate	Dr. I
Tr. Opii Deoderatum	M. X.
Glyco-Thymoline	Oz. II
Aqua Rosarium Ad Q. S.	Oz. IV
Misce et	
Sig. Dr. 1 every 3 hrs.	
(For a child one year of age.)	

Cholera Infantum.—A variety of acute catarrhal enteritis of intense severity, corresponding in symptoms and course to cholera morbus in the adult, but much more serious in termination.

Prognosis in these cases is at best not very favorable, although recovery is not impossible.

Treatment of these cases is of quite a different nature from those above mentioned. In the first place the fever must be combated and I know of no better method than a bath containing some Glyco-Thymoline, at about 80 deg. F., reduced by

adding small pieces of ice to 70 deg. or 65 deg. Next, pain. To reduce pain, 100th of a grain of morphine sulphate can be administered to a child of one year. Stimulation with strychnia hypodermically, iced champagne to prevent vomiting, brandy, whiskey and other stimulants.

One of the best methods for irrigating the large intestine is by introducing a small soft catheter through the rectum and injecting into the bowel about a pint to a pint and a half of warm water containing about 25 per cent. of Glyco-Thymoline. This I find removes and prevents the re-accumulation of the fermentative as well as the putrefactive products of the bowel. Should, however, the hyperpyrexia continue the douche may be given at a lower temperature. During convalescence great care must be taken in the feeding of the patient.

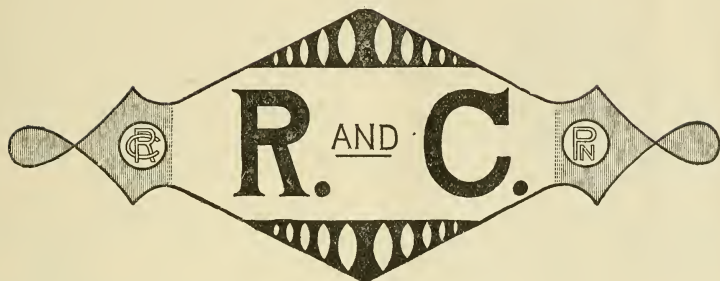
Acute Entero-Cholitis is an affection of inflammatory nature more severe than dyspeptic enteritis, chiefly of the ileum and colon, affecting especially the lymph follicles. This, like the preceding, is a disease of the hot months of summer, and the period of teething, especially. It is produced by the same causes as dyspeptic diarrhœa. It is most frequent during the ages of 6 and 18 months. It likewise may be a termination of dyspeptic diarrhœa or of cholera infantum.

Treatment: The general surroundings and hygiene necessarily play an important part. The medical treatment, however, is somewhat different. Anodynes are more imperatively demanded because there is greater suffering, and depletion may be needed in the beginning, by salines, though good judgment is required because the child's strength must be watched. The colon should be flushed with a solution of Glyco-Thymoline having a strength of 25 per cent. This, I find, answers admirably in these cases. The solution may be made with iced water. The coming teeth should likewise be watched and the gums scarified whenever required.

I will supplement my remarks by adding a few of the many cases treated with Glyco-Thymoline, and leave results speak for themselves.

Case No. 1. M. K., aged 8 months. Male; was taken with severe vomiting and colicky pains at night. The vomita contained lumps of coagulated milk. The stools were very offensive and returned at intervals of 20 minutes. I left a prescription for Glyco-Thymoline 2 oz., Bismuth sub-nitrate 1 drachm, rose water enough to make 4 oz. I called the next morning and found but little improvement in my patient, and at once flushed out the bowel with a

*M. A. Auerbach, Ph. G., M. D., New York City. Medical Inspector, Department of Health.



IN TYPHOID FEVER

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25 per cent. aqueous solution of Glyco-Thymoline and continued the prescription given the night previous. This treatment was continued for three days, the patient steadily improving during that time. I recommended that the child be taken away from the city, which was done. I heard later from the parents that the child had not had a relapse, but made a speedy recovery.

Case No. 2. Mary C., age 7 months and a half, was brought to my office, her little knees drawn up, a look of anguish on her face which was pale and drawn, with eyes protruding. She had a number of watery discharges from the bowels, incessant vomiting, a temperature of 103½, a rapid and feeble heart. A further examination of this poor little tot was unnecessary. Anodynes were at once administered to soothe the pain. I washed out the bowels with a 40 per cent. solution of Glyco-Thymoline and administered the same in a 50 per cent. solution with peppermint water internally in doses of 1 teaspoonful repeated every two hours. The results in this case far exceeded my expectations. The child made a slow but successful recovery.

Case No. 3. L. P.; male child; age 16 months; was called to check the diarrhœa, which was of a serious character, having a tinge of blood. The vomiting was not of a severe nature, the only alarming symptoms the child showed were the intestinal ones. Three separate washings of the child's colon were made at intervals of six hours. The child's food was restricted to barley water. This case, like the one preceding, made a perfect and speedy recovery.

Case No. 4. R. A., a little tot of the east side, aged 13 months, brought up in one of the dark and dingy rooms of a tenement house. This poor little one was suffering for five days before my attention was called to the case. I found it in an emaciated condition, unable to move a limb; the bowel movements were frequent and watery; the little one was on the point of collapse; strychnia was administered hypodermically to stimulate the heart, after which diluted brandy was given every half hour. The colon was irrigated with 24 oz. of a 50 per cent. aqueous solution of Glyco-Thymoline; I had the child under my observation for two and one-half weeks, and with proper food and fresh air the child made a good recovery.

Case No. 5. M. M., a boy baby seven months of age; teething, and causing all sorts of trouble for its parents, who were well to do. Was summoned to the house early one morning, found the little one vomiting quantities of curdled milk, and

movements having a decided fetid odor. I tried most everything in this case and received but small relief by the use of Glyco-Thymoline. Upon careful investigation I found that the teeth were causing the trouble; the gums were then lanced, and the child's diet restricted; that is, the breast feedings were given at three-hour intervals and only lasting five minutes at a time. Glyco-Thymoline was kept up; with perseverance and good nursing our little one soon got well.

Typhoid Fever.

(From the Experimental Diagnosis, Serotherapy and Prophylaxia of Infectious Diseases," by Staff Physician Dr. E. Marx, Vol. XI, p. 51. Bibliothek von Coler, 1902.)

The typhoid bacillus usually makes its exit from the body in the fæces, but in rare cases also in the sputum. The latter mode of excretion probably does not in general play a great role in effecting the spread of the disease; but just on account of its rarity it is likely to be overlooked, and hence, when it does occur, is a dangerous source of infection to surrounding individuals. Of the very greatest importance, however, being certainly the chief means by which contagion is transmitted, are the bacilli which are in numerous cases excreted with the urine. This fact was discovered by Huedpe and Seitz as long ago as 1885, and has been frequently confirmed; but its epidemiological importance was first realized only by Petruschky. The latter showed that in one case 1 cube centimeter [$\frac{1}{4}$ dram] of urine contained more than 170 millions of typhoid bacilli; and he calculated that in that instance the daily excretion of the micro-organisms amounted to 200 milliards of bacilli.

The most stringent disinfection of the stools, the sputum, and above all, of the urine, is absolutely necessary in every case of typhoid fever. And since the investigations of Neufeld have shown that in some cases the excretion of typhoid bacilli persists during convalescence and even for weeks after recovery, we are compelled to regard the urine as infectious in all cases until a careful bacteriological examination has demonstrated the absence of the micro-organisms. The premature dismissal of a patient in whom the bacilliary excretion has not ceased, constitutes a grave danger and may be the cause of a recrudescence of a typhoid epidemic.

Neufeld confirms Richardson's assertion that the employment of Urotopia 5 grams [75 grains] in 150 grams [5 ounces] of water, in tablespoonful doses three times a day for three weeks renders the typhoid

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urine germ free. And since Schumberg has shown that the Urotopinized urine as such inhibits the development of the typhoid germ, the cessation of the bacteriuria can only be accepted as a fact when the bacilli are no longer found after the remedy has been discontinued for a considerable period of time.

A Clinical Estimate of Agurin.*

This new diuretic, which was prepared by Impens, constitutes a combination of theobromine sodium and sodium acetate. The reasons given for awarding it the preference over theobromine sodium and sodium salicylate (Diuretin) are that in agurin the unpleasant effects of the salicylate upon the mucous membrane of the stomach are avoided, and that its greater percentage (about 60%) of theobromine, the active ingredient, supplemented by the diuretic action of the acetate of sodium, enhances its effect. According to the first clinical reports by Destree and Litten, agurin is especially successful in the treatment of dropsical effusions, and according to the latter, in those due to valvular lesions of the heart, when preceded by or given simultaneously with digitalis. While according to Destree's experience the increase of the quantity of urine is produced by relatively small doses, 5 to 8 grains daily, and prolonged for a period up to six days, the experiments made in Litten's clinic have shown that the effect of 45 grains daily is only transient. Equally encouraging results have been obtained in cardiac diseases with edema by Buchwald who prescribed 20 to 45 grains daily. For example, in a patient with valvular lesions of the heart, edema, and ascites, who passed 500 c. cm. of urine in the 24 hours, the quantity was increased to 1,500 c. cm., on the first day after the use of agurin, to 2,000 c. cm. on the second day, 2,500 on the third day, and 3,000 c. cm. on the sixth day. All these authors observed less satisfactory results in cases of renal inflammation. This was especially true in dropsies due to parenchymatous nephritis, while in mild cases of chronic interstitial nephritis better diuretic effects were reported by Litten and Michaelis. According to Buchwald the remedy is ineffective in ascites. Litten states that in contrast to digitalis it acts upon the kidneys and not upon the heart.

My experiments relate to 30 cases of edema and dropsies of manifold origin (myocarditis, valvular lesions, acute and chronic nephritis, cirrhotic kidney, pleural

exudations, ascites due to cirrhosis of the liver and tuberculous peritonitis). The most satisfactory results were obtained in cardiac affections, and especially in a patient who repeatedly responded promptly to its action. The patient was a carpenter, 45 years old, a confirmed toper, who was admitted to the hospital in a wretched condition. He presented symptoms of a typical myocarditis, with edema of the legs and ascites, congestion of the liver, bronchitis, and gastritis. Examination of the urine showed the presence of an abundance of blood and albumin and granular casts. The quantity of urine, which was much reduced, remained unaffected by digitalis and acetate of potassium solution, which were given the first week, being under 700 c. cm. in the 24 hours. Agurin was now resorted to in daily doses of 15 grains, and this increased the amount of urine threefold. On the day following the discontinuance of the remedy the urinary secretion sank to 1,000 c. cm., but at once increased after resuming its use. The patient was discharged feeling completely well, but returned after two weeks with edema and other symptoms of stasis. Agurin was at once prescribed again in doses of 15 grains, three times daily, and the same good results obtained.

While this case, which was one of the first in which the drug was tried, led us to entertain high expectations of its value, the results were confirmed in other cases of myocarditis with diminished secretion of urine. There were, however, some disappointments, which taught us that successful results in individual cases cannot be transferred to a wider field, and hence that definite indications cannot be established. In this respect our experience corresponds with that relating to diuretin. Phenomena of stasis resulting from valvular lesions of the heart were less favorably influenced, this being attributable in our cases to the degree of compensatory disturbance. In cases of extensive pleural exudation the quantity of urine remained unaffected by agurin before thoracentesis, and after the performance of this operation it increased irrespective of whether agurine was administered or not. At any rate, it proved a welcome auxiliary. In ascites either from cirrhosis of the liver or tuberculous peritonitis it was inactive, and our observations in this respect agree with those that have been made in regard to diuretin. In reference to the use of agurin in renal inflammation, we coincide with other authors, and noted a favorable influence only in chronic interstitial nephritis. It is worthy of mention that in healthy persons also an increase of the quantity of urine was determined.

On the whole, we have not been able to

*By Dr. A. Hess, Assistant Physician to the Friedrichshain Hospital, Division of Prof. Furbringer.

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notice any radical difference in effect between the new drug and diuretin. Undoubtedly, however, the observations made by Litten and Destree that it is better tolerated, owing to the absence of any salicylic acid effect, are in its favor, although this does not apply to all cases. Occasionally the patients complained of the unpleasant taste as well as of some discomfort, although these disturbances have scarcely ever manifested themselves to the same degree as after the use of diuretin. For this reason we regard the new remedy as a welcome and valuable substitute for diuretin and as obviating to a marked degree the by-effects of the latter, although too sanguine expectations should not be entertained.

THERAPIE DER GEGENWART.

June, 1902.

Ecthol in Scarlet Fever.

By John M. Turk, M. D., Canton, Ga.

I feel called upon to say something plain and practical in regard to the usefulness of ecthol in the above disease. I have used ecthol for one year in the epidemic of scarlet fever, and must say that it has more than met my most sanguine expectations. It has accomplished more than any agent I have ever used in a practice of over forty-three years. Ecthol robs scarlet fever of all the distressing sequels, such as nephritis, ear complications, adenitis, membranous angina, etc., if the remedy is given early enough and as often as every two or three hours, in bad cases, until disquamation is over, then not so often. A great many of my cases were malignant and quite a number ushered in with convulsions. In some of my malignant cases I gave double the prescribed dose. It prevents in a large degree the disintegration of cellular tissue, and will not disappoint any who may use it in scarlet fever—*New Orleans Medical and Surgical Journal*, May, 1902.

"Are You in Pain?"

You will probably ask this question more frequently than any other. Nothing appeals to one more strongly. To be able to relieve pain, whether it be a slight nervous headache or the most excruciating suffering from a severe neuralgia, brings the height of pleasure to both patient and attendant. The ideal remedy must not only do its work, but it must also do it quickly. Touching this point is an article in the Boston Medical and Surgical Reporter, by Hugo Engel, A. M., M. D. The author says: "Antikamnia has become a favorite with many members of the profession. It is very reliable in all kinds of pain, and as quickly

acting as a hyperdermic injection of morphia. It is used only internally. To stop pain one five-grain tablet is administered at once; ten minutes later the same dose is repeated, and if necessary, a third dose given ten minutes after the second. In 92% of all cases it immediately stops the pain." Farther on, Dr. Engel compares Antikamnia with the other coal-tar derivatives. He says that while some of these are valuable remedies for the relief of pain, "not one of them is so certain in its effect in comparatively as small a dose and so prompt in giving relief as Antikamnia in every kind of pain." This uniformity in its action leads him to believe that Antikamnia possesses properties differing from the other coal-tar products, while it is certainly free from danger, if given in anything like reasonable quantities, which is not the case with other products from coal-tar. Five-Grain Antikamnia Tablets afford the most accurate and convenient form for administration.

Anusol in the Treatment of Hemorrhoids

By John Moir, L. R. C. P. & L. R. C. S., Ed. [Abstract from *The Therapist*, London, June 14th, 1902.]

In the case of patients suffering from piles, whether the hemorrhoids are newly formed or chronic in character, whether small or large, even up to large venous knots hanging from the rectum, and at times bleeding profusely, the medical man has found himself, as a rule, very much handicapped in their treatment, owing to the want of any thoroughly reliable method to satisfy the exigencies of the patient, by procuring an early and lasting cessation of the pain and ultimate total disappearance of the disease, and also during the treatment to obtain at all times a soft and painless stool. I have for many years used all kinds of astringement and sedative suppositories introduced into the rectum, and given internally, in milk, in water, or in very weak tea, a powder composed of pot. bicarb. gr. x.; pulv. guaiac., gr. x., et lac. sulph. gr. v., with more or less beneficial results.

However, in January, 1899, I became acquainted with Anusol Suppositories, in which we have practically a specific for hemorrhoids, and various other diseased conditions of the rectal mucous membrane.

Women when pregnant, and after parturition, are often troubled with constipation, piles and painful defecation, for which Anusol has been repeatedly found of the greatest service.

In another obstinate and frequently intractable complaint, the oxyuris vermicularis of children, and adults also, and in pruritus vaginæ, Anusol Suppositories gen-

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erally effect a radical cure. In sores, too, of the external skin, whether of infants or adults, in intertrigo and prurigo, rubbed into the affected parts the suppository is an infallible remedy.

Space will not permit me to dwell too long upon the cases which I have treated with benefit by means of the Anusol Suppositories, but I briefly give a summary of some cases in which a permanent cure has been effected by this remedy.

Case I.—G. W., journalist, aged forty-eight, had suffered severely from bleeding piles for the last three years, which affected both health and temper. He came under my treatment on March 4th, 1902, when I put him on two Anusol Suppositories daily for the first four days, and one at bedtime for the next four days, with the most satisfactory result. The stools became soft, pappy and painless, and the piles disappeared altogether, and have not since returned. His general health also has very much improved.

Case II.—H. T. M., aged forty, Paris, correspondent to one of the great daily newspapers, suffering from hæmorrhoids of long standing and great severity, and accompanied with pruritus ani, came to me for the first time on Jan. 30th, and I ordered him to use one Anusol rectal Suppository each night at bedtime, and gave him a mixture of euquinin, hyoscynamus and digitalis. On April 30th he had completely recovered, and was able to return to his employment, but continued for a short time to take a 5 grain euquinin tablet three times a day, to prevent any return of the weakness. He had previously been in the Hereford hospital in Paris, and in another in this country, but did not get much relief until he began using the Anusol Suppositories.

Case III.—Mrs. A., after parturition, suffered from a large hæmorrhoid, accompanied by prolapsus ani; the only treatment was warm bathing of the affected part, with the use of Anusol Suppositories twice daily for six days, when they were discontinued, as they were no longer required, and there has since been no return of the complaint.

Case IV.—M. H., aged fifty-three years, insurance agent, suffering from piles of great severity and sensitiveness, with pruritus ani, after a great variety of treatment, hospital and private, was treated by me for a fortnight with Anusol Suppositories and ichthyol pills, one every four hours, with entirely satisfactory result, and no subsequent return of the malady.

The entire question of the treatment of hæmorrhoids can be summed up in one sentence: Procure regular passages from the

bowels. This object can be thoroughly attained by the regular, systematic use of Anusol Suppositories. In the event of a threatened relapse, the further use of two or three of the Anusol Suppositories will prevent its recurrence.

Nuclein Therapy in Typhoid.

Protonuclein is indicated according to Latta in typhoid because it increased leucocytosis and thus adds to the resisting power of the cell structures in overcoming disease. As soon as he suspects typhoid, without waiting to insure the diagnosis, he commences to give Protonuclein, usually giving large doses in the beginning, lessening the quantity until the system has responded to the treatment, the patient taking no other food or medicine for two hours. At the end of the first half hour of this period, 4 to 6 ounces or more of hot water are given and thirty minutes later the dose of Protonuclein and then an hour allowed for absorption. In this way every three-hour period is divided into two parts, the first two hours devoted to Protonuclein and hot water and the last one to feeding and whatever other treatment may be indicated. Frequently during the first twenty-four hours no benefit may be produced. The temperature and disturbing symptoms may increase. After that both will decline. The treatment is not an abortive treatment, still, it is not unusual to have a patient better on the eighth or tenth day than would be the case with the old method at the end of the third week.—*Journal of the American Medical Association.*

Sanmetto in Irritable and Atonic Conditions of the Genito-Urinary Organs.

I have used Sanmetto quite extensively in my practice for a number of years, and have learned from the universally good results obtained from its use to pin my faith to it in all irritable or atonic conditions of the genito-urinary organs. I find it the true aphrodisiac in both male and female patients. Since I have used Sanmetto prostatitis has lost much of its terrors and cystitis has ceased to be the grave disease it was before its use. I shall continue to prescribe Sanmetto.

F. A. CROMLEY, M. D.

Gallipolis, Ohio.

The Date of the New Orleans Meeting of the American Medical Association.

May 5 to 8, 1903, is the date set for the fifty-fourth annual meeting of the American Medical Association at New Orleans.

The Charlotte Medical Journal.

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CHARLOTTE, N. C., OCTOBER, 1902.

No. 4.

The Value of Some of the Early Symptoms of Pulmonary Tuberculosis.

By James A. Burroughs, M. D., Asheville, N. C.

After pathological changes have taken place in the respiratory organs, and bacilli are being thrown off, the diagnosis is easy. It is in this condition that we receive a larger number of our patients from physicians throughout the country, with a letter of introduction stating "that Mr. A. or Mrs. B. has incipient tuberculosis, and that with a few months sojourn in the Asheville air, under your supervision," Mr. A. or Mrs. B. has been assured of a speedy recovery. This introduction is quite familiar to the average Asheville physician. On physical examination we usually find these patients already septic from necrosed areas: most certainly the disease is not incipient. The larger number of physicians who instruct these cases to us are above an average, but they are general practitioners and their minds are not sufficiently aroused in this special line to detect the early symptoms. It is only too often that any or all early symptoms have been overlooked, when the true situation is fully comprehended. In looking over the verbal statements in our records we get so many histories of typhoid fever, chronic malaria, intestinal indigestion, bronchitis, etc., with the present trouble very recently developed, yet we know in the majority of instances it was tuberculosis in the beginning of the decline.

Delayed diagnosis of tuberculosis so very often means to the patient loss of all chance of restoration that I feel we cannot be too careful in analyzing all the early symptoms which indicate the way the straws point in this, the deadliest enemy of the human family.

It is fairly safe to state that none are born tubercular, hence it is a sound presumption that in each case a pre-bacillary or tubercular stage exists.

While none may have been born tubercular, many are so poorly parented that the nervous system, blood, lymphatics and general make-up mark them as prospective consumptive candidates. Ancestral history should always be obtained, as it so often gives information as to condition.

Environment occupies such a prominent position in arriving at a diagnosis that it is well to inquire into the climate, location, construction of residence or place of business, with minute details as to local sanitation. It is well to note if tuberculosis has

ever existed in the place of abode. The writer knows one railroad telegraph office which furnished five cases of tuberculosis in three years; also one of the largest banking houses in the United States that furnished seventeen tubercular in less than four years (in each instance the primary infection was due to one consumptive). In every suspected case it is well to ascertain if a consumptive has ever occupied the quarters, as it may materially assist in arriving at a diagnosis. It is of diagnostic value to ascertain kind of food mostly used; it is the one who systematically omits meats and fats who is most likely to become tubercular.

In most instances the physician knows very little of the patient's family history or environment, and it is only with care that he elicits either. He is forced to rely upon some one or all of the following symptoms, viz:

Temperature, pulse, respiration, blood, hemorrhage, loss of weight and strength, night sweats and physical examination.

A continued evening rise of temperature, although it may be only a fraction of a degree, when malaria and typhoid fever have been eliminated, can safely be classified as tubercular; this is especially true when there exists a sub-normal temperature of from 1 to 3 degrees in the morning. Indeed, the sub-normal temperature is of as much diagnostic value as the evening rise, although it has not been noted by authors. Have occasionally observed cases of tuberculosis with tissue changes and tubercle bacilli present, of months' duration, without an evening rise or being sub-normal in the mornings.

A continued afternoon or evening accelerated heart's action, not accounted for by some specific cause, points to tuberculosis; especially is this true when the heart is lacking in volume. Thanks to bacteriologists, typhoid fever and chronic malaria have each been eliminated as a possible error, and the way is open for a diagnosis of tuberculosis by elimination or exclusion.

Even very slight continued accelerated respiration not accounted for in some other way is suggestive of tuberculosis. Of course, fluids in pleura or pericardium or endocarditis will alter not only the frequency and character of respiration, but are otherwise easily eliminated.

Blood examination in the tubercular not only shows a loss of corpuscles, but also per cent. of hemoglobin. This condition may exist for quite a time after a loss of

blood from any cause or serious illness. There is nothing positively diagnostic in blood examination, yet it shows a lowered vitality, a condition always susceptible to tubercular infection; indeed, if such does not already exist. In a small number of cases, when first seen the blood is up to normal, both in count and per cent.

Cough is one of the first symptoms in tuberculosis which attracts the attention of patient or friends. It is a characteristic, or, I may say, a pathogomonic hack which tells the story to the experienced ear. Some friend usually notices the morning hack before the patient's mind has been directed to it; usually the patient attaches very little importance to the matter until it grows decidedly worse with a noticeable loss of weight; tired feeling and weakness causes the subject to seek medical advice. Notwithstanding cough is to be considered one of the most constant early symptoms in this dreaded disease, yet tuberculosis can, and sometimes does, exist with its absence. Broken down area of lung tissue with no cough has been noticed seven times by the writer. This condition has sometimes been observed when the patient was already septic from re-absorption; this is accounted for by the fact that the cavity is walled off with neighboring bronchioles occluded, and the balance of the lungs uninvolved.

Hemoptysis or spitting of blood is sometimes the first premonition or warning; this may be so slight that the saliva is only tinged with red, yet if the blood does not come from the throat or gums it is most likely of grave import, and the patient should be taken under medical supervision. My records show many cases that were in apparently perfect health until profuse hemorrhage, without any evident cause. Hemorrhages occur as frequently, if not more so, at night, awakening the patient out of a sleep, as while exercising during the day. No intelligent physician need ever confuse the blood from throat or gums with that from the lungs or bronchial glands with the cough and air bubbles in the expectorated blood, besides, one can detect with the ear the point of oozing.

A gradual loss of weight is a diagnostic symptom of real merit. This symptom is present frequently before the patient's attention is directed to cough or any of the other symptoms. Looseness of clothing and a general languor causes patient to tip the scales, noticing a loss in weight which continues; medical advice is sought. This gradual loss in weight is the rule of that class who have come of tubercular stock and have inherited poor resisting power.

Where there exists a very small area of infiltration the weight may be normal and

practically no constitutional disturbance; especially is this true with a fibrous wall encircling the tissue involved.

Night sweats are always indicative of tuberculosis, although, in my experience, have never occurred until patient had developed a weak heart's action, with more or less fever. Sweating during sleep, continuing for any time, after a debilitating illness, is suggestive of a tubercular state. The small child with the habit of profuse sweating on dropping to sleep has trouble ahead, notwithstanding the general health is seemingly good.

A careful physical examination of lungs is of the highest importance. All the means at our command should be employed. If there exists a portion of the lungs with retarded or partially suppressed respiratory action, or on the other hand the respiratory murmur is exaggerated, we must note the same, being able to understand the pathological condition as a means of early diagnosis.

It is hardly necessary to note, when expectoration is established, a positive diagnosis is a matter of microscopic observation.

Wish to state that while the tuberculin test for cattle is admissible, that I have never considered it free from harm, or reliable in the human subject.

It is observed that this paper is very incomplete, as only a few of the early symptoms have been noted. However, I trust that every thought calculated to throw light upon this important subject may be taken up by others and thoroughly discussed.

The Proposed Appalachian Forest Reserve from a Climatological Point of View.

By C. P. Ambler, M. D., Asheville, N. C.

The climatological condition of the Southern Appalachian mountain range has, during the past twenty years, become generally recognized as the most desirable of the eastern half of the Continent. For many years before the war this section was frequented by the lowland Southerners during the summer on account of the stimulating, bracing effect of the cool mountain air. Immediately after the war, the section was brought into prominence by the writings of Dr. Gleitsmann, now of New York; Dr. Henry O. Marcey, of Boston; Dr. Geddings, of South Carolina, and many other prominent medical writers, who showed that the Southern Appalachians were particularly free from malaria, and that but extremely few of the natives died from tuberculous diseases. The absence

of malaria is explained by the fact that the whole section contains neither swamps nor standing water. Dr. Gleitsmann for many years resided in Asheville, N. C., and it was during the period of his residence here that he pointed out to the medical profession that while the summer climate was practically ideal, both from a standpoint of humidity and temperature, that the winter months were equally enjoyable to the tourist and invalid, because, being situated so far South the rigors of the Northern winter were not met with. He truthfully showed that while some cold weather was encountered, the winter months, as a whole, were such that an outdoor life was practicable. Following Dr. Gleitsmann's writings the Northern tourist turned to the Southern mountains as a winter resort, and later many invalids from the North followed, until to-day the Southern Appalachians has the unique reputation of being the best all-the-year-round resort in the country. The Asheville plateau offered the greatest advantages, and continues to be most popular, with the result that Asheville has grown from a small town of 2,000 inhabitants twenty years ago to a city of 25,000 (including the suburbs within a radius of two miles). This plateau, and particularly Asheville, has become cosmopolitan, inasmuch as its inhabitants are from almost every State in the Union. Like Asheville, all the surrounding towns have rapidly developed, until to-day there are a dozen towns of fair size with modern conveniences, which depend upon the tourist and health-seeker for their support.

Twenty years ago the county was entirely covered with forests. It had, and still has, an annual rainfall of forty inches, but the extreme roughness of the country, the absence of level valleys, and the geological formation of the soil and underlying strata is such that, even with an annual rainfall of 40 inches, the relative humidity averages for a year between 50 and 55 out of a possible 100.

Following the demand of the tourist, the railroads invaded the territory at a great cost. Other timbered sections of the country had been, to a great extent, cleared, with a result that the railroad companies encouraged lumbering operations, and the demand for lumber increasing, the operations rapidly assumed immense proportions, and each year has seen great increase in the number of saw mills, tanneries, pin mills, pulp mills, shuttle mills, and all kinds of lumber manufactories.

At first, the lumbering operations were confined to the valleys and more accessible mountains, but as the price of lumber has

advanced, the mills have pushed higher up the mountains, and to-day the price of lumber is such that the lumbermen have penetrated the most inaccessible spots. With the railroad, also, came a host of home-seekers, who preferred to live out of the towns; many were poor; the mountain sides could be bought for a song; they cleared the land and attempted to raise crops on land which experience has shown should never have been cleared. Many of these clearings were cultivated but for two or three years, when the wash became so great and uncontrollable that the fields were abandoned.

Before the war, the best part of the agricultural South was along the lowlands of the rivers at the foot of the mountains. The water supply was constant, floods and drouth were unknown. The forest-covered mountains acted as a reservoir and fed the rivers regularly and evenly from the thousands of springs which abounded in the uplands. Hundreds of thousands of the lowland acres have now been abandoned on account of the floods and drouths, whole river valleys, as for example, the Catawba, have been ruined by a sea of sand and detritus from above, which only appeared as the mountains were cleared.

The streams of the mountains themselves have changed. The high and low water mark is much more extreme than formerly. Streams which were formerly always clear are now muddy following each shower. Fifteen years ago Asheville located a magnificent waterworks plant six miles up the Swannanoa River. It was then thought that this river would furnish the best of water for fifty years at least. In June of this year, Asheville voted \$200,000 in bonds to extend the waterworks line back into the mountains twenty miles further.

As the forests have disappeared, and as the stripped mountain slopes have been laid bare, there has been a slight change in the humidity of the air. True, the absolute humidity is not as great in sections so cleared, but the other changes more than compensate for the slight advantages here gained. Radiation of heat is greater, with the result that the wind storms are more violent. Evaporation is more rapid, with the result that while the absolute humidity is lower the relative humidity is slightly increased.

In the sections cleared the summer temperature is higher, and the winter temperature is lower.

The history of the world shows that as the steep mountains are denuded of forests, the agricultural lands below are crippled,

water powers fail, floods and drouth increase; deserts are the result.

The scenic attractiveness of this section has been, and is yet, comparable with any in the world. While all other natural conditions change with the forest destruction to a greater or lesser degree, the scenery, if destroyed, is beyond hope of redemption.

As the forests disappear the air contains more organic and mineral matter. Dust is constantly encountered where before it was unknown.

The destruction of the forests of the Southern Appalachian Mountains will not only bring about the changes of surface conditions, but will inevitably result in that the air of the region will take on different properties, be it humidity, be it ozone, altitude, be it the absence of dust, be it a question of sun-light, radiation, evaporation, or be it a combination of all of these conditions which heretofore have gone to give the air of this section that exhilarating tonic effect which all new arrivals notice and mention, it remains that that something which we love, we cherish, and must protect to save the reputation of the greatest garden spot of the South, will inevitably change in proportion to the amount of the forest destruction.

A bill passed the Senate, June 24th last, carrying an appropriation of \$10,000,000 to be used in establishing a forest reserve in the Southern Appalachians. The States interested have already given their consent for the establishment of such a reserve, and exempted the same from taxes. The bill now occupies a place upon what is known as the list of "Privileged Bills" in the House, and will come up next December.

The profession of the Eastern and Middle States, who have for years been sending health-seekers to this region, should be interested in this measure. The indications are that it will become a law, thus ensuring the perpetuity of one of, if not the most frequented, most accessible and most deserving of the mountain health resorts of the country.

Drainage of the Fallopian Tubes for Hydro and Pyo Salpinx.

By Edwin Ricketts, 408 Broadway, Cincinnati, Ohio, Pres. of Am. Asso. of Obst. and Gyn., 1902.

That these conditions can and do exist, with limited ovulation coming from lessened ovarian stroma; is accepted by men familiar with the doing of abdominal and pelvic surgery.

All cases in which the appendages have been removed before the natural climacteric period has been passed has demonstrated its

gravity by the imposed and precipitated serious nervous symptoms that present themselves to the unfortunate. Any artificial menopause is not only trying to the patient, but to the family and to the family physician; who must continually have poured into his ears the woes of a nervous system that, to say the least, is sadly out of tune. Suicides are not infrequent from this condition. There are instances in which the appendages should be removed with, or without a hysterectomy, and the patient must accept a precipitated menopause; it is the inevitable.

The macroscopical condition of a hydrosalpinx is distention of the tube, with its distal and fimbriated occluded extremity turned in and folded on itself, being held fast by the web like adhesions. The same description for pyo-salpinx holds good; save that the pus in evidence shows that the inflammatory process has gone a step farther. The pathologists tells us that the pus, in many instances has lost its virulency; in other words, it has lost its infective power—become sterile. A condition greatly to be desired; and one that renders possible conservative measures. It justifies this conservative effort; it demands it in selected cases. The increasing sterility in women is another reason.

In the hands of trained men, the diagnosis of effusion into one or both tubes is not difficult. A differential diagnosis is impossible before the abdomen has been opened.

In dealing with these conditions, the median incision of the abdominal wall, between the symphysis and umbilicus, offers the most for the operative procedure. With the abdomen opened and a hydrosalpinx of one or both tubes found; first free the adhesions along with freeing the fimbriated extremities; carefully aspirate, through the recently freed distal end, the hydrops from within. Dilate with graduated dilators, or, a very small nasal bi- or tri-valve speculum this opening; and after bringing the fimbriated end of the tube well up into the field of operation—holding it there by catch forceps—wash out the tube with peroxide of hydrogen; after which, mop out with long narrow strips of 5% carbolated gauze. Now take a strip of 5% carbolated gauze, twelve to twenty inches in length and one-half inch wide, and with the opened end of the tube shove one end of the gauze down to the uterine end of the cavity with a small sized probe; say ten to twelve inches in length, as the case demands. Pack the tube well, but not tightly; drain and pack the other fallopian tube in the same manner. Free any ovarian adhesions along with excising any hema-

toma, or incising any cysts; to be followed by any local treatment commonly used for such conditions. Return the appendages to the pelvis, after a most careful toilet of the peritoneum has been made; letting the free ends of the tubal gauze come out through the abdominal incision resting at the lower angle; with the outer ends resting on the outside of the abdomen. Suture the abdominal incision down to the gauze, but *leave it so there will not be any trouble in removing the same*; which should be done at the end of twenty-four or forty-eight hours.

With the abdomen opened and a pyosalpinx of one or both tubes found present; free carefully any adhesions possible of the ovaries, tubes and fimbriated extremity; aspirate through the fimbriated ends; drawing up and holding the same into the field of operation with catch forceps; wash out the tubes with peroxide of hydrogen, followed by a 5% solution of carbolic acid with the aid of a urethral glass syringe; after this, mop out dry with strips of 5% carbolated gauze.

Here the question naturally arises—and not without reason—can drainage of pus tubes, as just described, be best accomplished through the abdominal incision as suggested for hydro-salpinx, or through the cul de sac into the vagina? If we could be as sure of an aseptic condition as we can the draining of a simple hydro-salpinx through the lower angle of the abdominal incision, I would say drain it in a similar manner. We cannot be so sure, and for this reason, and for the assistance of gravity that comes from the cul de sac incision to complete vaginal drainage, I would say make the vaginal incision through the cul de sac; and shove the free ends of the tubal gauze through the incision and down into the vagina, that has been rendered aseptic before the beginning of the anaesthetic. With the vaginal drainage once established, close the abdominal incision from end to end; remove the tubal gauze by pulling on the vaginal ends anywhere from forty-eight to seventy-two hours.

Immediately after its withdrawal a small carbolated 5% wick can be pushed through the vaginal incision into the cul de sac, there to remain for twenty-four or forty-eight hours.

In trained hands, pus tubes are seldom ruptured in freeing the same; but in any case that rupture occurs, you are to be justified in excision; but not so in any case, unless rupture occurs as the result of your best efforts to free the same.

Medical Education in North Carolina.

By F. Juat, A. B., M. B., Aberdeen, N. C.

There has been a great deal of discussion and writing lately about medical education, but especially one paper by Dr. Lewellyns F. Barker, on "Medicine and the Universities," published in "American Medicine" for July 26, 1902, is of such importance as to deserve careful study, and cannot but make us doubt the wisdom of some changes about to take place in our own University as well as in Davidson College.

The paper distinguishes between

- (1) The Proprietary Medical School;
- (2) The Pseudo-University School;
- (3) The Semi-University School;
- (4) The Real University School;

No. 4 being still a desideratum.

The question that presents itself is: Into which of the four classes must we put our new University Medical School as it is now? The object of the present writer is to facilitate this work of classification, and in order to avoid misunderstandings so common when discussing fundamental problems, I shall first briefly allude to my theory of knowledge.

Scientific knowledge is, for the past, an abstraction of laws out of the routine of perceptions of mankind and for the future a *belief* that this routine will be repeated; in short, knowledge is *faith* in the uniformity and order of Nature. That there should be such a routine and why there is one is a metaphysical problem that need not concern us here, further than to note the significant and suggestive fact that faith is at the bottom of both Science and Religion. Above this simple sequence of perceptions which gives, translated into words, a *description* only, our reason enables us by a process of abstraction to select some perceptions more immediately connected with each other, and this selection again translated into words is more than a description; it is a scientific *explanation* or a *causal* sequence. This last sequence is the only one that satisfies our reason, hence the rational principal of universal causation, the cornerstone of the sciences. We note thus that all the sciences are abstract, since they cannot possibly deal with the connected whole but only with a part of the perceptual world, considered objectively, apart from the rest. This is important for our study as we shall see later on.

General and human Physiology is of course the fundament of all medical activity, and is itself based on Physics and Chemistry, and these again on Mechanics and on the two fundamental laws of the indestructibility of matter and persistence or conservation of energy. This last law

must be so well comprehended as to become an organic part of our intellect before we can hope to attain to a true knowledge of Physiology; but still many young men without a college education and about to begin the study of medicine know very little about its meaning, except perhaps that it has been found to exist! Physiology is also dependant on Morphology, Anatomy and Histology, and only after mastering these fundamental sciences can we proceed to the study of *pathologic Physiology*, which includes again general and special Pathology, *Ætiology*, Bacteriology, Hygiene, Chemical Pathology and the physiological action of drugs.

Now all this vast knowledge, and we may add chemical and microscopical diagnosis, can be acquired at the University of North Carolina just as well and perhaps better than at larger places, where for obvious reasons the individual students cannot receive the same amount of personal attention. Not long ago, as I was studying the newer microscopic technique, I had the pleasure of seeing two of the teachers at work at Chapel Hill. They are original workers, investigators; their attention is not diverted by the cares of an onerous general practice, and they are full of enthusiasm for pure science; in short, they fulfill all the requirements of their responsible position. The necessary laboratory equipment is also on hand and needs only more elaboration.

But now we come to the application of these sciences, to the treatment and, if possible, cure of sick people, that is, to clinical Pathology, and here we are no more studying abstract Science only, but Art, and will therefore find the individual factor, both in the subject and object, becoming all important. It is no more with abstractions, cadavers, normal men and animals that we are dealing with, but with diseased living beings, and we must *do* practical work by using our stored abstract knowledge. Our pure sciences become teleological.

Diseases are necessary abstractions for purposes of classification, etc., which we do not meet with in nature; we meet only sick people, patients, each with a history of his own, and each case is to be considered as an entity in relation with all nature; it is not and cannot be quite identical with any other observed cases on account of many points not included in the concept "disease;" these points are heredity, conduct of life to date of examination, previous diseases, food, occupation, temperament and all these factors that go to constitute the life, character and individuality of a man. The fundamental sciences

may enable us to make a satisfactory diagnosis, but are not sufficient for practical therapeutics. Therefore the true physician and teacher must be able to disregard preconceived ideas and generalizations and must adapt his therapeutic measures to the case under observation and not to an arbitrary concept; he must *individualize* and the student must be so impressed with it, that it will ever remain present to his mind. In order to be capable of impressing it on others, one must have practiced it on so many cases, that it has become habitual, a kind of reflex. Such thorough diagnosis and treatment, the ideal one, requires time and profound thought and is incompatible with a professorship combined with a large private and consultation practice. According to Prof. W. James, genius consists in being capable of concentrating one's attention on unusual objects or perceptions, which have escaped the attention of the majority of observers; this quality is precisely the *one* that makes a successful diagnostician, although we do not call him a genius for all that! We see then that a teacher of the practical branches of medicine: practice, surgery, obstetrics and the specialties, must not only thoroughly possess the fundamental sciences, but must be free of all the shackles of routine practice, have a special aptitude for imparting knowledge and must have enjoyed the advantages and opportunities of increasing and making his natural gifts available. This is indeed a rare combination and it would be nothing short of a miracle to find many such men in one small town. Whoever has had the privilege of sitting at the feet of such complete teachers, knows what I mean and what incalculable and ineffable effects they are capable of producing; indeed they throw a new and radiant light on Determinism! Fortunately for the State, we have many honest, conscientious and capable practitioners, but how many do actually possess the qualities and profound knowledge required for teaching? There are still ethical and moral considerations to be noticed, since we can only get all we ought to know out of a patient, when he sees clearly that we are impelled by love and sympathy; but it would take us too far to note all these desiderata. Again, well equipped hospitals cost a great deal of money and must be filled with all sorts of patients in order to illustrate lectures and to be useful to the student and prepare him for his later duties; but our people have a prejudice against going to public hospitals and there are no large cities in the State to supply sufficient material at least in the surgical and obstetrical line.

As we have seen, we are supplied with

the men and can get the material, for the teaching of the fundamental (propædæutic) sciences, but the question if we have the teachers and the hospital facilities for the practical demonstration of the laws and art of rational medical, surgical, obstetrical and special diagnosis and treatment in sufficient quality and quantity, to be worthy of a venerable and illustrious university, this question I leave for the unbiased judgment of the reader to decide; to my mind, considering the present unpreparedness, the answer can only be negative, and for classification and further developments and details, I refer again to the paper mentioned above.

It might be said that a beginning must be made sometime, but this objection loses its value when we reflect that this is not a case of emergency and that, not far from us, there are excellent institutions already supplied with men and means toward the great end in view—I need only mention Johns Hopkins medical school and others will suggest themselves. The newspapers mention especially the reduced expenses for the student;—do they forget that it may be cheap in more than one respect? In conclusion let us state that personal considerations have nothing whatever to do with this paper, and that it is written in good faith by a lover of scientific truth. I have so much confidence in the knowledge and capacity of some of the men proposed as professors and teachers, (I do not know them all) that I have repeatedly sent patients to them for exact diagnosis and treatment; I only wish I could repose the same confidence in the willingness and ability of our Legislature to provide the necessary funds, but unfortunately, judged by the past, this hope is rendered quite problematical and takes the appearance of a dream.

On Treating Specific Urethritis with a New Salt of Silver.

By Blake Baldwin, M. D., Professor Dermatology and Venereal Diseases—Post Graduate Medical School—Professor Clinical Dermatology—College of Physicians and Surgeons, Attending Dermatologist to the Cook County Hospital, Attending Dermatologist to the Provident Hospital, President of the Samaritan Hospital, Fellow of the Chicago Academy of Medicine, etc., Chicago, Illinois.

In reviewing the literature on the subject of Gonorrhea, it seemed to me as though every man who had ever treated a case had written a paper on it. The authors of treatises on the treatment of this disease, are legion, and there are almost as many vaunted remedies as writers,—yet it ap-

peared that much was to be desired in the way of a treatment which would insure definite results in the most of the cases under observation.

With the exception of those who rely largely on "authority" and whose aim is to find a medicine "good for" a vaguely understood condition, there has been a very general corroboration, by clinical experiment, of the belief that silver salts are, par excellence, the best gonococciides known to medicine.

There are very many silver salts of known and unknown composition available for this purpose, a veritable "embarras de richesse."

The rule that, "The more remedies the less positive the cure," applies here forcibly.

Possibly it were worth our while to glance over the array of medicaments which the industrious exploiters have prepared for us.

Protargol—"Silver albuminate," containing 8.3% silver, said by its inventor, Eichenrun, to be, "not a chemical salts, but a combination of silver with the proteid molecule." (1).

Argonin—The first, I believe, of the silver albuminates, introduced by Liebrecht (2), first used clinically by Jadasson (3), of Breslau, contains 4.2% silver, and "made by the action of Ag. No. 3 upon a compound of Sodium and Casein."

Albargin—"Gelatoze-silver," containing 15% silver, said to be a "double combination of silver nitrate with gelatose." (4).

Argentamine—is a "Solution of ethylenediamine-silver nitrate containing 10% ethylenediamine and 10% silver nitrate," reported on by Schaefer.

Ichthargan—"Silver Sulpho-ichthyolate," used first clinically by Leistikow of Hamburg, (6).

Largin—"Silver-protalbin" (Lilienfeld) employed clinically by Pezzoli, of Vienna, (7).

Collargolum—The "soluble silver" invented by Crede of Dresden, (8).

Tryptargan—Another silver compound, but of which I can learn nothing. I presume from the name it would be a combination of silver and trypsin.

Nargol—A chemical combination of silver and nucleic acid containing 10% silver, discovered by Schwickerath in Detroit, (9), made by the addition of freshly prepared silver oxide to nucleic acid in solution and precipitated in form of powder by adding an excess of ethyl alcohol, then filtered and dried.

It seems to me that here is an ethical question which demands consideration,—our code does not countenance secret for-

mulae, patented instruments, nor proprietary remedies, etc., yet we welcome with open arms any new remedy, especially if it has a mystifying name fortified by a foreign birth and pseudo-formula.

Why this paradox?

I must confess to a predilection for definite chemical compounds and not for concoctions, and when the silver nucleid [Nargol] was brought to my attention and its chemical composition and process of manufacture laid bare for inspection, I resolved to give it a trial, especially as it is made in this country.

Gonorrhea is so prevalent, that the fact [which will be conceded by most of you] that our best treatments have proven unsatisfactory in nearly half the cases, render it my duty to publish these experiences with this new remedy inasmuch as only in this way can definite deductions be made as to the most efficient mode of handling this disease.

I will give brief histories of five typical cases occurring in my practice—the results of which speak for themselves. I have since repeated these results many times and feel so confident of the treatment that I have practically abandoned all other methods in the treatment of Gonorrhea.

Case 1.—A. M. K., age 22. Traveling salesman. Discharge from meatus urinarius noticed August 26th, three days after exposure. Began self-treatment, used Santal-Midy Capsules and irrigation of Pot.-Permanganate for a week without apparent result. A physician made deep injections of Silver Nitrate, one each day for three days.

Sept. 2nd, the patient fainted while boarding a train, taken home in an ambulance and physician pronounced him suffering from Typhoid Fever, which ran an uneventful course:—practically convalescent 1st of November, when he came under my care. Microscopic examination of discharge revealed pus corpuscles, containing many gonocci. Diagnosis: Urethritis gonorrhoea chronica, anterior and posterior. Gave several thorough irrigations of Pot.-Permanganate Solution and on Nov. 5th, began giving injections of $\frac{1}{2}\%$ solution of Nargol, rapidly increasing the strength of the solution, as the symptoms remitted, using successively 1, 2, 3 and 5% solutions and then installations of five drops of an 8% solution, with a modified Ultzman apparatus. Coincident with this treatment I gave five minim capsules of pure Santal Oil t. i. d. and after a few days one capsules daily. The discharge ceased very shortly after the 1% Nargol Solution was exhibited and has not returned at this date (3-26-'02). During the entire administra-

tion of Nargol the patient stated that the irritation was trifling and there was absolutely no pain at all following the exhibition of such strong solutions as I used. I had no more trouble with this than with weak solutions of Pot.-Permanganate.

Case 2.—Medical student. Aet. 24. Consulted me in December. Stated that his trouble had begun in October. There was a profuse urethral discharge showing many gonococci under the microscope. Diagnosis: Gonorrhoeal urethritis, anterior and posterior. Prescribed injections of $\frac{1}{2}\%$ Nargol Solution to be taken four or five times daily after urination and internally Aminiform 7 grains t. i. d. At end of first week the discharge had markedly decreased and the gonococci had disappeared but a slight cystitis had developed. The injections were stopped and the patient ordered to drink large quantities of water. At end of second week the injections were begun again and increased rapidly until he was using 3% Nargol. I also began installations into deep urethra with Ultzman's Syringe at 8% Nargol, three times during the week. At the end of five weeks' treatment I passed sounds a few times, but the discharge and prostatic symptoms had disappeared. In his joy at his recovery the patient indulged in excesses of all kinds but there was no return of the trouble.

Case 3.—Lawyer. Aet 35. Consulted me Jan. 25, regarding a profuse urethral discharge, first noticed same day. Microscopic examination showed myriads of inter and extra cellular gonococci. Diagnosis. Urethritis gonorrhoea acuta, anterior. Primary attack. Treatment consisted of 5 minims globules of pure Santal Oil t. i. d. p. c. I irrigated the urethra with Potassium-permanganate solutions (1:3000) using two litres daily. Patient used injections of $\frac{1}{2}\%$ Solutions of Nargol, on rising, at dinner time, and on retiring, always after urination. During the first week I increased the strength of the Nargol solutions to $1\frac{1}{2}\%$. After continuing this treatment for ten days the discharge ceased entirely. Injections of Nargol in 3% solutions were given for five days longer, stopping the irrigations of Permanganate and the Santal Oil. Fifteen days later all treatment was stopped. It is now twenty-five days since patient has had a treatment and there has been no return of the trouble.

The patient noticed no more irritation from the 3% Nargol than he did from the $\frac{1}{2}\%$ solution. The permanganate and the Nargol produced the same subjective sensations.

Case 4.—Mechanic. Aet. 29. Presented himself eight weeks ago, (Jan. 26) with a recurrent urethral discharge of eighteen

months duration. Gave three injections daily for three days of Ag. No. 3 in the strength of 1 grain to 6 oz. of water. This gave rise to a profuse discharge which microscopic examination showed to be teeming with gonococci. Diagnosis. Urethritis gonorrhoea chronica, anterior et posterior.

Prescribed injections of Nargol 2%, to be taken four times daily after urination for five days. The patient returned with the blennorrhea greatly lessened, and showing fewer cocci. He was then given instillations into the deep urethra of 8% Nargol solution with an Ultzmann's syringe, three times a week, when the urethral discharge ceased entirely. Return to the Ag. No. 3 solution and dilatation with sounds for a day or two brought on a slight, thin, milky discharge, which contained no cocci and which quickly ceased. There has been at this date no return of the trouble. There was no more irritation from the 8% instillations than the 2% injections, which was very slight indeed.

Case 5.—Contractor. Aet. 27. Presented himself early in January, reported that he had contracted gonorrhœa in the preceding May and had been treated by his family physician. There was a gleet discharge from the meatus which showed a few gonococci under the microscope. Diagnosis. Urethritis gonorrhoea chronica, posterior. Prescribed injections of 1% Nargol four or five times daily after urination for one week. Second week prescribed 2% Nargol; third week 3% Nargol and then began deep instillations with Ultzmann's syringe of 8% Nargol every other day for two weeks, the last two installations being of 10% Nargol. Passed sounds few times. Patient has returned from time to time but there is no relapse.

Summary.

1. None of the cases under treatment developed any complications or sequelæ as results of the treatment, even when such strong solutions as 8 and 10% were used.

2. Nargol solutions cause the gonococci to disappear from the urethral discharges in from three to four days.

3. My experiences lead me to believe Nargol is practically stable and almost un-irritating although a most efficient germicide.

4. While I deprecate the word "cure" still such splendid results as I have obtained incline me to the opinion that Nargol intelligently used very nearly approaches to a specific for Gonorrhœal urethritis.

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What Causes It?

By J. A. Regan, M. D., Weaverville, N. C.

I was very much pleased with Dr. Annie Alexander's article in the last Journal, and was glad she brought the subject before the Medical Society, but the doctors are not the only ones that should be acquainted with the facts to which she refers. I suppose all well informed physicians know them, but do they do their duty in imparting this knowledge to the laity? I fear we are all a little careless on this point. But many of our patients, of this class, are not seen by the physician until he is called to deliver them. Many girls, when married and get in a paturient state, try to keep it from even their most intimate female friends. They go everywhere—see all sorts of sights, and try to put on a bold face that they may appear to the world as young and active as ever. They are found at shows, theaters, dances, take horseback rides, play tennis, etc. They know no danger, are not warned of any. In many cases meet with no harm, but may strike something suddenly that may cause their child to be seriously injured in some way that to her and her friends are unaccountable. I confess there are some marks and deformities that our small knowledge of the works of nature in utero is beyond our ability to explain. Plutarch speaks of a family in Thebus, every member of which was born with a mark of a spear-head on his body. Dr. Combe relates a case that fell under his observation. A shoemaker in Portsburg called and showed him his son, eighteen years old, who was an idiot. He was simple and harmless, but never could do anything for himself. His wife was a healthy, sensible woman. He had three

other children, whose minds were good. The only way he could account for this boy's condition was that at the time his wife was pregnant he was keeping a hotel and an idiot came there, and his condition made such an impression on her mind that she could not get rid of his looks and actions night or day, so her child, when born, was an idiot destitute of mind.

Sir Edmond Howe mentions a case of a thoroughbred mare which, in the year 1816, had a mule by a quagga, the mule being a miserable quagga, bearing unmistakable quaggy marks. In 1817, 1818 and 1823 her colts by a fine horse all had quagga marks on them, although she had never seen the quagga since 1816.

Dr. Steger says he saw a very striking case. Mrs. B., while at church, being pregnant with her first-born, saw a lady whose features were very striking and peculiar. She continued looking at her as if she was mesmerized, and after she returned home the image had so fixed itself in her mind that she could not for a moment evade it. During the solitude of the night it was daguerretyped in her mental visions, distorted and frightened, for months, with but little refreshing sleep. When her child was born it had the precise features of the lady, and as she grew older those features became more marked. This lady was not related to her or her husband, but a stranger.

The London Gazette of September, 1832, shows the effect on the child of unfavorable physical conditions. There were in Paris some twelve or fourteen beggars, all deformed in some part, in various ways, and all born at Lille in curious dark caverns under the fortifications, the effect of these places, for want of light, producing malformed births. It became so notorious that the magistrates of Lille issued orders to prohibit the poor taking up their abode in them.

During the year 1855 Dr. Steger was requested to visit a lady, by her husband, who had been married about twelve months, that had been accustomed to take a good deal of exercise, which had rendered her system vigorous and healthy. Her husband informed the doctor that his wife was pregnant, in her eighth month; that she was losing flesh and despondent and depressed in spirits. A very sad circumstance had been witnessed by her some months previous, which had produced severe mental shock, from the effect of it she could not rally. She being alone one evening, look-

ing out of their cottage, saw a sow bringing forth a litter of pigs surrounding by other hogs which were eating them as they were born, and were even tearing them away before fully born. She tried to drive the sow to a place of safety and failed. She witnessed these hogs tear the sow so she died. He said this circumstance had so changed his wife that she became melancholy, so much so that he feared the result. She informed the doctor that this scene hung as an incubus over her by day and by night and caused frightful dreams, so she could not sleep; that she had no appetite to eat, and what little sleep she had was constantly disturbed by frightful dreams. There was but little change in her condition up to her confinement. Her child was well formed except that the perineum was cleft from the symphysis pubis to the coccy in nearly a direct line, and the greater part of her bowels protruding, surrounded by the peritoneal sack. He could not return them, owing to adhesions. The child lived about two hours.

Two cases came under my observation. A good and intelligent lady of fine sense, the mother of two children, was called to see a sick brother. She was pregnant. Her brother died while she was there, and she closed his eyes, and when her child was born it was virtually blind. He is getting old now; has never been able to see to amount to anything. The other case was a lady in a pregnant condition; visited the family, and this boy's eyes seemed to haunt her. She could not drive the sight of that child from her mind, and when her child was born his eyes were in the same condition.

From a careful investigation of this subject I am convinced that circumstances affecting the mind of the mother at a certain time affects the fetus in utero and determines its beauty, perfection, health and mental and moral qualities in after life, and that some women are so constituted mentally and physically that their impressions on the mother's mind will stamp deformity on the unborn infant, and the mental and physical condition of all mothers during the period of gestation exercises a controlling influence on their offspring. How much to be reprobated is the habit of some mothers, devoted to fashionable life and city amusements, who, regardless of the future of their frail fetus, their hopeful heir in future, who live in a continual round of excitement and heartless frivolity. From such an infringement of natural law they and their offspring must suffer the penalty.

Chthonophagia.

By Charles Adrien Julian, M. D., Thomasville, N. C.

This article will appear grey-headed and with wrinkles to lovers of antiquity, but the topic deserves the fullest consideration of every physician, and especially of him whose business it is to administer to the relief of unfortunate children. A slight insight into the destitution of the neglected classes would surprise and lead you to wonder at the terrible habit. Every truth meets with antagonists, and there are persons who pronounce this depraved craving a fallacy. I believe that no one who has given this subject his attention can forget the picture, that incontrollable craving, to satisfy which the patient resorts to anything, becomes cunning, lies, conceals the habit by every form of deception, and ends a mental, moral and physical wreck. Children suffering from this disease have a capricious and variable appetite as regards their ordinary food. Alkaline and saline tasting substances are especially attractive. They soon begin to lose flesh, small vesicles containing a yellow liquid form over the body, and their feet have a peculiar redish hue. The tongue and mouth become red and very raw, breath extremely offensive, headache and constipation. After a period of such symptoms others more severe are added. Rapid anæmia and emaciation results, and ascites is a frequent complication. The gastric contents are simply "water-soaked" and putrid. No definite cause is known, but the theory is, that bad food, especially food which has undergone changes which lessen its digestibility and impair its nutritive value, and food that is deficient in lime salts and other constituents that are required to supply the wear and growth of the body, are principal causes. Many cases acquire the habit by seeing others indulging, and little by little, like the morphomaniac, the habit is fastened. Some of these are from the best of families, where every want is supplied, especially in the way of nourishment. I have had cases where the patient would, after being restrained all day, crawl from the bed at night and lick the sand from cracks in the floor, while others would chip pieces of brick from the walls and grind the mortar from the joints. When kept from dirt I have seen them pull grass and eat it as ravenously as a starving herbivora.

Each case is a law unto itself. There is no especial quality or kind for all. Some like sand, brick, mortar, or grass, while others prepare their own menu by baking mud in the noonday sun. These substances often obstruct the intestines. I have in mind now a case where I removed the rem-

nants of three corn cobs from the rectum of a healthy looking girl just beginning the habit. In the treatment, first of all is restraint. A keeper should watch the child by day and by night. A strict dietetic regimen must be faithfully carried out. Milk, fresh meat juice, rice, soft cooked eggs, baked apples, orange juice and baked potatoes are well borne. The body must be kept warm and the bowels active. The general medicinal treatment consists in giving Tr. Nux. Vom. with some of the simple bitters, such as gentian, cincona, etc. Salol gr. v and Bismuth gr. xx should be given every three hours. 5 gr. charcoal tablets administered several times daily have splendid effect. Complications must be met as they arise. Moral treatment is of the greatest importance. If we take the child and treat him as we would be treated—by kindness—and suitable instruction, he becomes gradually elevated and conscience-enlightened, and is brought from the most miserable, degraded and wretched condition of moral deficiency to the purpose of its being.

The Value of Galvanism as a Therapeutic Agent in Gynecology.

By Dr. J. C. Walton, Reidsville, N. C.

I regret exceedingly that a want of space prevents my giving this important subject the attention it so richly merits, for practical experience in the use of this agent, covering a period of many years, has convinced me that in it we possess a remedy of more value in the treatment of diseases of women than any other with which we are acquainted. Fully realizing this, it's to be deplored that in this ultra-surgical age so many ambitious young men look upon the knife as the only curative means; and leave in the wake of their inexperience and rashness scores of miserable and unsexed women.

For the practical application of electricity it is not necessary to have a thorough knowledge of physics or to understand complicated apparatus. For a visiting and office battery, where the physician does not care for an expensive outfit, a 30-cell bi-chromate battery (Waite & Bartlett), with a set of uterine and vaginal electrodes, an abdominal pad, a current controller, and a milliamperemeter will answer the demands of all ordinary cases. All batteries should be provided with a pole-charger which designates at a glance the positive or the negative pole and enables us to charge them at will.

The method of application is very simple. The vaginal or intra-uterine pole, is always known as the *active* pole, and the connec-

tion is completed by the attachment of the other electrode to the abdominal pad placed over the lower end of the abdomen, the pad being previously saturated with a solution of sodium bicarbonate in determining which pole to use as the intra-uterine, or "active" one, it is important to have in mind the difference in physiological action of the two poles. The action of the positive or acid pole is that of a "dryer" or dessicant, and is indicated to lessen congestion, check hemorrhage and morbid secretions, and to allay pain. The negative, on the contrary, being the alkaline pole, is indicated to increase secretions, promote absorption, and to soften down hard and indurated surfaces. When using the positive as the "active" pole, care should be taken before removal, to reverse the poles, to facilitate its easy withdrawal. In my experience, its use has been limited to the following troubles: Amenorrhea, due to lack of development of sexual organs or lack of tone, etc., chronic ovaritis, ovaralgia, metritis, endometritis, and leucorrhœa. In dysmenorrhea and sub-involution of the uterus and vagina, my experience has been eminently satisfactory. In fibroid tumors, I have found it to relieve pain and check hemorrhage, and to reduce the size of the tumor.

The only contra-indications to the use of electricity are acute inflammatory processes and pregnancy. It may be used cautiously in sub-acute conditions.

The following illustrates its use in a very intractable case (hemophila):

Mrs. S., age 45, mother of six children, 1 miscarriage, last labor 10 years ago. Since then had been constant and at times profuse hemorrhages. Extremely pale and anemic, weak and confined to bed. Examination showed a large, retroverted, subinvolved uterus, spongy and full of granulations; depth of cavity almost six inches. Gave routine treatment, including curettage and packing, with strychnia and ergot internally. These failed utterly. Patient's condition gradually grew worse, and as a dernier resort I tried electricity, after consultation with a most eminent surgeon who ridiculed its use, and could suggest nothing but the orthodox remedy which we had already used. The first treatment (150 m) very promptly and decidedly checked the hemorrhage. Afterward I continued the treatment, giving 50 to 75 m. every third day. This treatment I continued for about six weeks with the results of reducing the depth of the uterus to three inches, the uterus returning and remaining in its normal position. The hemorrhage checked entirely, and patient has been in perfect health ever since.

A hot danch of sterile water should always be given after treatment and the patient kept in bed about 24 hours. I consider the above case of extraordinary interest in view of her being a "bleeder," and a few years previous, almost dying from hemorrhage, resulting from the simple extraction of a tooth.

Ano-Rectal Transplantation.

Rushmore (Annals of Surgery) relates a case where very satisfactory results were obtained. The patient, a male aged 39, had five months before, while bending over his work, been gored in the rectum by a bullock, which caused a lacerated wound through the sphincter, and both backward and forward into the perineum. The loss of blood was sufficient to weaken him. Several operations had been performed in New York, Boston and Chicago, but without any material relief. He had no control over the sphincter, and was constantly always in a filthy state, and unable to work. The sphincter manifested no contractile power whatever on inserting the finger into the rectum, nor could the patient by any voluntary effort cause it to contract in the slightest degree. Inguinal colotomy and ano-rectal transplantation were the only two methods of treatment likely to do good. As it was desired to restore the man to a condition fit for active work, the latter operation was decided upon, after explaining to him its experimental character. With the patient on his side, under ether, an incision was made extending from about a quarter of an inch outside the anus following the natal cleft to the sacro-coccygeal articulation. The coccyx was removed and the rectum, including its middle and lower third, freed from the surrounding soft parts posteriorly and laterally, and the hemorrhage checked by torsion. The patient was then put in the lithotomy position, and with an assistant holding a sound in the urethra, the anterior portion of the rectum was separated by means of scissors well up to Douglas' cul-de-sac. The anal end of the rectum was then anchored in the upper angle of the wound, just below the sacrum, by means of black silk sutures. The wound below the upturned rectum was then irrigated and stitched. The result of the operation was a rectal pouch, the bottom of which was about three inches below the transplanted anus, and the posterior wall of the rectum was folded back on itself and formed a thick valve just inside the anus. The operation was followed by a good deal of pain for a few days, and some suppuration, but the ultimate result was very good, the patient gaining strength and weight, and was able to resume work.

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MEDICAL SOCIETIES AND THE AMERICAN MEDICAL ASSOCIATION.

One of the very vital and important subjects to the medical profession to-day is that of becoming more completely organized; that is, that there may be acquired a more nearly full membership of the societies of the United States in comparison to the whole number of physicians in active practice.

Such an organization of the profession in the Union would be of the greatest good to the largest number, in the truest meaning, of which the expression may be applied. Such an organization of the medical profession in the United States would be a power for the general good to our whole population. There would then be an influence which when exerted upon the legislative bodies for the purpose of securing sanitary measures or of prosecuting state medicine, would accomplish the object desired. Those means could thus be secured, which would add to the physical and moral welfare of every individual and of the whole population of the nation.

Besides such an organization would be a vast post-graduate course to every physician in the land; serving not only as a continuation of the clinical atmosphere to the recent graduate, but a continuous school for the general practitioner, who strives to keep abreast of the real progress of the professional and scientific work in medicine. Dr. Nicholas Senn, in his presidential address in 1897, before the American Med. Association, said: "The medical societies, large and small, are the legitimate and proper post-graduate schools."

Through such means the profession takes a higher rank and each individual member thus becomes more proficient in his daily work. Through such physicians the patient is the gainer through the increased power which the physician possesses.

A united and organized profession will be able to more effectually study the great problems of scientific interest.

Every honorable medical practitioner in the United States who is eligible to membership in the medical society of his county, should ally himself with the organized body and become an earnest, active member. He thus aids an association that will help him.

Every physician owes it as a duty to himself, to the Society of the county in which he lives; he owes it to the whole organization as a profession of which he is a mem-

ber; and he owes it especially to his patients who call him and confide in his ability to give them the recognized advantages which modern medical knowledge promises.

If a physician wishes to raise the query, does it justify him in becoming a member of, and in taking an active part in the work of a local medical society? Let him look at the members of the medical profession throughout the United States, throughout the world and observe where the great thinkers, the prominent and most successful practitioners, the leaders in the profession stand in regard to society work. He will observe that all of them are active in their local society work. There, all new thoughts or discussions are first presented. If such men are justified in expending time and means in the work of the medical society, the encouragement should apply to every practitioner. Dr. J. B. Donaldson, in an address before the Medical Society of Washington County, Pa., quoted in The Pennsylvania Medical Journal for August, 1902, in an editorial, "Membership in County Societies," said: "To meet the medical men of our county is a treat that you can't afford to dispense with; it is a legitimate excuse to get 'out of the rut' and take a day off, that will do you good, socially as well as scientifically."

On the other hand where do we find the charlatan? Isolation suits him best, he prefers secrecy for all of his methods of alluring the unwary. The more isolated a man becomes in his work the more narrow and egotistical he becomes in his views.

The American Medical Association in its reorganization plan, with the affiliated State and county societies, has in view the enlistment of every eligible regular practitioner in the Union. This should receive the thoughtful consideration of all practitioners, who are not already members of a society, as well as encouragement of those who are already thus connected.

In 1903 the American Medical Association will meet at New Orleans. This will present again the opportunity for the practitioners of the Southern States to be present at this scientific body, and to watch and take an interest in its proceedings. Let those who are eligible to membership in county societies, secure such membership at once, that they may thus be in position to secure membership in the National Association and be entitled to attend the meeting next year.

Let as many physicians of the South as possible plan their arrangements that they may be present at the meeting and go prepared to help make it one of the greatest and most successful meetings in the history of the Association.

SOME CONSIDERATIONS OF PNEUMONIA.

The season is upon us when this disease is more prevalent than in any other part of the year. Therefore it becomes a seasonable subject to consider, to think about, and to make ourselves alert as to its appearance, especially in its earliest signs, since the first influence that may be exerted against it is of the most importance; if there is a possibility of aborting the disease; which is held by some to be possible though denied by others.

Osler, in his work on Practice says: "This is the most widespread and fatal of all diseases. Pneumonia is now the 'Captain of the men of Death' to use a phrase applied by John Bunyan to consumption."

Bert, Medical Record, March 8th, 1902, says: "Pneumonia in the light of modern research;" "While the death rate of consumption is decreasing, that from pneumonia is increasing. It is undoubtedly infectious chiefly through the sputum; preventive measures can accomplish more than serum therapy."

That it has been marked in mortality with the death rate at a much higher percentage than the earlier records show, has been recognized during the past few years. Here is a field for study and discovery. Have the more modern methods of treatment been less successful than those used earlier? or is the disease assuming a more serious form?

Much has appeared on this subject in medical literature during the past year, the burden of the study has been on the treatment of the malady. Whether the disease can be aborted if seen during the early hours of its development is not proven, though some authors so maintain and much stress is laid on the use of veratrum veride for that purpose. This drug has had its advocates for years. When the pathological condition of the early stage of the disease is considered there is strong considerations in favor of its use, combined with warm bath and Dovers powder, pushed until free perspiration results. This course is only applicable during the first stage; following such period, it would only prove harmful in the use of both the veratrum and the opiate. This line of treatment was discussed by W. L. Dickson, of St. Louis, Mo., in a paper "The abortive treatment of Pneumonia," Jour. A. M. Association, Nov. 9th, 1901.

De Lancey Rochester, Buffalo, N. Y., published in the same journal discusses in a masterly manner the general conditions of pneumonia and covers the treatment in a different course, he maintaining the infectious condition in pneumonia and con-

siders the disease as self limited and not one to be aborted.

Doubtless, in many cases, if seen early in the onset of the disease, there is a possibility, if the diagnosis is fully assured, that condition may be readily controlled by bold treatment with very watchful care, on the part of the medical attendant. And yet there will remain a large number of cases that cannot be successfully relieved in that manner.

The rational course of carefully considering the patient and the prevailing condition in the individual and devising the treatment according to the merits of the case is the true method, and the one which will give the largest success.

A very pointed lesson that has been learned during the past few years is the necessity of avoiding the use of the coal tar preparations, the evil resulting will always over balance any possible gain by the lowered temperature as a result of their use.

The use of cold applied to the chest in the form of cloths wrung out of ice water or even the ice pack, has been urged and used by some. Dr. Mays, of Philadelphia, has used this method in a large number of cases with apparent good results. He has collected much valuable statistical matter on this subject. This manner of treating pneumonia deserves a more extended trial and observation. It can be used with any other line of treatment.

The various functions of the body should be carefully watched. The kidneys and bowels should be kept in good active condition. The nervous system protected by calm, quiet restful demeanor in the sick room.

EXOPHTHALMIC GOITER.

This peculiar and apparently incomprehensible disease or pathological condition which occurs in numerous instances in many localities especially in mountainous regions has attracted and is causing much thought and study with the purpose, if possible to acquire a true knowledge of its nature, cause and course of development, so that it may be more fully understood, than that which prevails at present.

To-day the profession is greatly in the dark as to much of that which pertains to the course and cause of this usually unsightly and exasperating, as well as dangerous disease.

Why this increased growth of the thyroid gland, the peculiar optic and cardiac derangements are problems that have caused much thought, study and investigation, with such appearance of small progress toward enlightenment. The peculiar ner-

vous unrest and alarm on the part of the patient, the prominence of the eye-balls, the suffocative disturbance experienced at the throat and over the chest, with the wild, irregular, rapid action of the heart and anemic condition of the subject, are realities which will cause medical men to earnestly study, and endeavor when in charge of such a case to discover the true and real condition which is the prime factor in all of this physical derangement.

One thing which is recognized and has been observed for many years is that this disease prevails largely in mountainous sections of countries. Why it prevails in such regions more than in others is not plain. Also that it occurs more frequently among females than in males is another fact which is recognized.

When we come to consider the treatment of this disease we are met at the threshold by discouragement and failure as Osler puts it "medicinal measures are notoriously uncertain."

Like all diseases where the pathological conditions are so much in the dark the therapeutic gammet runs quite a range; in this disease the *materia medica* has been exhausted including serum therapy.

In different individuals the progress and course of the disease, under the same treatment is extremely varied, the results thus cause many methods to be used in the efforts to treat the cases.

Under the present absence of correct and thorough knowledge of the pathological condition, make the purely medicinal course in the management of the disease sure to be quite disappointing and filled with failures.

What is needed for a more successful result in the care of these patients, is that the condition be studied until the exact pathology is fully known and thoroughly understood; then the rational remedial measures will soon be presented.

Electricity, used thoughtfully with a proper consideration of the effect with the present idea of the nervous elements entering in the economy of the disease, has the endorsement of many *nervo-clinicians*.

Surgery has received much consideration by worthy and conscientious surgeons in the removal of the entire gland, part of the gland and also operation on the nerves or blood supply of the gland.

Kocher has an article in *Mittelungun* a. d. *Greutzbieten*, Jena, ix, 1902, covering 304 pages, or the whole of the number. He urges the suppression of the vascularization of the gland. He describes his experiments in 93 cases with a cure of 75%. He speaks highly of hydrotherapy, thinks

"thyroid treatment harmless, and that iodine has aggravated many cases."

Let all hospitals throughout the mountainous regions especially, make strenuous efforts to work out this study, that the true nature of this disease may be thoroughly understood, so that the profession may be able to relieve these really wretched people of their continued suffering that their days may be made comfortable, if not thereby prolonged. Large hospitals with complete laboratory facilities, where cases are cared for, should exert every effort to give this condition a most thorough study.

THE PASSING OF THE NEGRO.

Professor Ernst Haeckel has said that it is absurd to attempt to study an adjustment of the structure and laws of society without an adequate knowledge of the structure of its individual parts.

That is a wise observation. All society and government is and should be founded, more or less, upon natural laws. To understand and apply these laws it is absolutely essential to study natural structures.

He who knows life intimately from the monad to the cell-complex man, is the one best fitted to formulate, publish, and apply the laws of government and society. To discuss intelligently a social problem, then, it is clear that one must have knowledge of the structural factors involved.

What does the mass of orators, authors, preachers, and newspaper writers know concerning the structural life and habits of the negro? Avalanches of sciolistic cant and hysterical screeds too plainly answer. And these can avail nothing, naturally.

The negro problem, so-called, is one for which scientists alone can foresee the inevitable solution. It is not a subject for the crazy prognostications of demagogues and spellbinders. In this first decade of the twentieth century the finger of Science points clearly to the outcome of the problem. Filth, immorality, disease; these words tell the story, and Nature hints her will to Science by these signs.

The facts.—It is appalling to contemplate the widespread increase of syphilis and gonorrhoea among the negroes since the promulgation of Lincoln's Proclamation of Emancipation. In the cities more thickly populated with them it is true that more than seventy-five per cent. of the negroes are victims of one or both of these diseases. This fact alone would be sufficient to abridge in a large measure the procreative powers of the race. From this predisposing cause, and from a natural aversion to cleanliness and hygiene, tuberculosis is making alarming strides into the negro ranks, and we know that it is de-

stroying more of these unfortunates than is any other disease.

In a recent article in the New York Medical Record, Dr. M. L. Perry, pathologist of the Georgia State Sanitarium, shows that fifty per cent. of the autopsies made in the negro department of that institution last year discovered tuberculosis involvement. Dr. Perry also shows that insanity among the negroes of Georgia has increased about one thousand per cent. since 1860! All of these facts are correlative.

Even so far as this, does it not seem that fate looms grim and terrible before the negro race? If the once proud, powerful, and cultivated nations of the Portuguese and Spaniards have fallen to decay before license and lasciviousness, can the poor, weak Ethiopian survive the onslaught of the frightful curse he has brought upon himself? It is most unlikely.

But this is not all.

It is a law of nature that hybrids cannot perpetuate their species. Miscegenation is hybridization. And so far as race preservation is concerned, the evil effects of this miscegenation are visited upon the negroes, for the progenitors of the mulatto are almost invariably the negro woman and the white man. The pure strain of negro is rapidly dying out, and it has been shown that the breeding together of mulattos results in sterility in the course of a few generations; just as the mule, the offspring of the horse and the ass, is barren.

Now these are all facts, not fancies, and they are supported by figures. According to the United States Census reports the average increase in the population for each decade before the war between the states was about thirty-three per cent. In the decade of 1890 to 1900 the increase was but seventeen per cent!

The white population maintains its average of increase of twenty to twenty-five per cent. for each decade.

Is not the inevitable outcome plain?

Verily, he who runs may read.

IGNORANCE AND THE PROFESSION.

The general practitioner is the bone and sinew of the medical profession. It is he who safeguards the health of individuals and of nations. He is ever alert to see and recognize and stamp out, if possible, edemic, epidemic, and pandemic. He combats the present actualities of general disease, and prevents possibilities of future trouble.

But he must have his limitations. No man exists who could master and retain the

mastery over the various specialties as they are prosecuted to-day. Progress and Science, as opposed to Stagnation and Art, make the thorough mastery of one special branch of medicine the full life-work of any one man, no matter how huge may be his brain.

We have no intention of arguing for the right, the necessity in fact, of the existence of the specialist. That is firmly established. As we see it, the one disadvantage of specialism is the tendency which naturally follows for the general practitioner to neglect any and everything pertaining to the specialist's sphere. In fact, to-day, the ignorance—it's a harsh word, but a just one—of many practitioners in the diagnosis and treatment of diseases, say of the eye, ear, throat, or nose, is really astounding.

We may illustrate.

Often retinal, choroidal, or other internal ocular disease, is referred to the ophthalmologist with the diagnosis of "cataract". Not many recent graduates in medicine know didactically, much less clinically, the difference between pterygium and cataract. Even the most astute of the general run of practitioners do not know that the normal senile sclerosis of the lens often stimulates cataract at a cursory glance.

We know of a case where a child was allowed to go blind untreated, who was suffering from a severe ulcerative keratitis. The family physician saw the case and assured the parents it was a simple "cold in the eyes"—no use for him to come in again; so he did not come in, but the sight went out.

We know of another case where a man had one eye enucleated by an enthusiastic general surgeon for the relief of trachoma. The patient did not wait to be referred to the specialist when the remaining eye became equally affected.

Again, we can cite a case where the physician was sedulously treating as erysipelas a most virulent gonorrhoeal ophthalmia. The little patient's sister, in the same room with him, had a blooming gonorrhoea!

The cases of hypertrophied turbinated bodies in the nose that are referred to the rhinologist as "polyps" are not a few; and the chronic purulent otitis media that "will be outgrown" is daily met with.

Many, and many more, are the cases, where, after a single ophthalmoscopic glance, a urinary examination, shows a simple diagnosis, Bright's.

SOME CRITICAL REMARKS ON BRIGHT'S DISEASE.

Science is built up and progresses through the combined influences and power of experience and reasoning. Experience or reasoning, either without the other, would be empty of results, so far as the advancement of science is concerned.

Bright's disease has long been an enigma to scientific students. So called because Bright first recognized that portion of its pathology which has direct reference to the kidneys, it is still, so far as definite etiology and successful treatment are concerned, a sad and unsolved problem. Up to twenty years ago it was unanimously believed that the mere presence of albumin in the urine was sufficient for a diagnosis. Many still believe so. This has been proved incorrect. Albuminuria may exist without any other demonstrable pathological sign in the entire frame. On the other hand, Dieulafoy (*Bulletin de l'Acad. de Med. de Paris*, June, 1893), corroborating Lepine, Lanceaux, and others, has shown that autopsy proves many cases of Bright's disease where the urine, carefully examined, showed, at times, no albumin, though uraemic symptoms were present. Supporting the view that no albumin is found in some cases of nephritis, Fienga, (N. Y. Med. Record, 1894) supposes that these instances may be due to a specific virus getting access to the kidneys from the external genitals. This is, at best, a far-fetched proposition, when the anatomy and physiology of the parts are considered.

Mannaberg, Letzerich, Feissinger, and others, believe Bright's disease to be due to micro-organisms, and cite proofs to that effect. But is it not true that we know nephritis to be sometimes caused by chemical toxic agents, as well as by the toxæmiæ of the acute infectious fevers?

It seems clear enough that the initial symptoms of the disease are of a circulatory nature. This would not be true were the primary lesion in the kidneys. The cerebrospinal phenomena so often present may be seen, at times, at the inception of the disease, and they are due, of course, to circulatory disturbances. Fangeres Bishop (*Transactions Amer. Med. Asso.* 1902) has shown a case in which, by dieting and avoidance of hurtful factors, such as extremes of temperature, the kidneys were spared, while the fatal issue came through the brain.

On the whole, the evidence, as we have it to-day, seems to point to nephritis as a symptom of one or more of many varying forms of toxæmia or blood dyscrasia.

It is true that such a conclusion may have no positive effect in the matter of treat-

ment of the condition, though this would not be impossible; but it should, at least, be sufficient to cause us to see the utter futility of treatment such, for instance, as the most recent acquisition to renal surgery—the Edebohls operation.

MIGRAINE AND EPILEPSY.

Among the commoner diseases for which the practitioner is applied to for relief, there are few that he cannot deal with more satisfactorily than migraine and epilepsy. These two affections, while apparently not immediately threatening the lives of the persons afflicted, yet cause an endless amount of suffering and unhappiness. The patient is often in a mood for self-destruction, so harrowing is his distress, and the physician who relieves him has done a work that will reap a sure reward in one way or another.

Migraine and epilepsy are considered, by many authorities, to be closely related. This may be true as regards the ultimate causation of the two diseases but personal idiosyncrasy must be taken into account. The manifestations of an exciting cause may be markedly different in different individuals. Opium soothes one man, but violently excites another; yet it cannot be said that relaxation and excitation are like treatment. Of course, the removal of the ultimate cause will cure the effect in both instances; but too often, from lack of facility, or perhaps lack of perspicuity, we are obliged to treat disease symptomatically.

The truth is that, in all cases, migraine and epilepsy are manifestations of interference of function in the great tenth pair of cranial nerves. Epilepsy is a disturbance of the motor fibres, and migraine a disturbance of the sensory fibres of the vagus. This much seems to be certain. It is evident, then, that any morbid element in any of the organs involved in the wide and "wandering" distribution of the vagus might produce either of the two diseases, according to the particular susceptibility or idiosyncrasy of the person attacked. It seems idle to try and confound migraine with epileptic aura; the one is sensory, the other motor in character.

Upon these premises, we can put no faith in the conclusions of those¹ who try to narrow down the exciting causes of these affections.

As a broad assertion, we are perfectly

¹ Alexander Wallace, *Lancet*, 1893; W. Hind, *Provincial Med. Jour.*, 1894; Clauss, *Jour. d'Accouche*, 1894; C. E. Herter, *Jour. Nerv. et Ment. Dis.*, 1897; W. Stekel, *Wiener Med. Woch.* 1897; N. Krainsky, *Jour. A. M. A.*, 1898; Rachford, *Amer. Jour. Med. Sci.* 1898; Wm. House, *Buffalo Med. Jour.* 1898; J. P. Cobb, *Clinique*, 1898.

safe in assuming that any constant leakage of nervous force, drawing directly or indirectly, through any of its connections, upon the pneumogastric pair of nerves, may result in the precipitation of migrainous or epileptic attacks. Professor A. L. Ranney, and Dr. G. T. Stevens, of New York City, though regarded in some quarters as enthusiasts, not to say cranks, have certainly shown, beyond peradventure of a doubt, that a large proportion of this nervous leakage occurs through faulty focus and muscular imbalance of the eyes. The immortal Charcot's "migraine ophthalmoplegique" has become widely recognized throughout the neurologic and ophthalmologic world.²

Among practitioners it is becoming every day a more and more acknowledged fact that a large proportion of cranial discomfort, cephalalgia is directly due to faulty ocular conditions. And it is not amiss now to remind the rank and file of the profession that where there exists headache, neuralgia, migraine, epilepsy, or nervous conditions of apparently obscure causation, look to the correction of possible causes in the eyes, before falling back permanently on symptomatic treatment.

Dr. R. E. Mason, formerly of Westminster, S. C. has recently located in Charlotte for the practice of Medicine. For a number of years he has been a successful practitioner in his old home and we predict for him a bright future in the Queen City. We extend him a cordial welcome.

BOOK REVIEWS.

The Practical Medical Series of Year Books comprising ten volumes on the year's progress in Medicine and surgery issued monthly under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago, Post-Graduate Medical School. Volume VII. *Materia Medica and Therapeutics; Preventive Medicine; Climatology; Forensic Medicine.* Edited by George F. Butler, Ph. G., M. D., Henry B. Favill, A. B., M. D., Norman Bridge, A. M., M. D., Harold M. Moyer, M. D., June, 1902. Price, \$1.50. The Year Book Publishers, 40 Dearborn Street, Chicago.

The editor speaks particularly of Antitussin. "The use of this remedy in pertussis is advocated by J. W. Frieser as the results attained indicate that it is efficient in aborting and curing established cases. It is an organic preparation of fluorin, a salve consisting of five parts difluorophenyl in ten

parts vaselin and eighty parts lanolin. It is rubbed into the skin of the neck, chest and back, and the relief was almost immediate in the fifteen cases in which Frieser employed it." The writer devotes considerable space to Cacodyl and its derivatives. The preparation chiefly used is Sodium Cacodyl, which is an organic combination of arsenic containing 55 per cent. of arsenious acid. It may be given by the mouth or hypodermically, the daily dose being from one-half to one and one-half grains, and is much less toxic than other preparations of arsenic. It has an especial affinity for nerve centers in which it seems to become fixed.

Following the administration of the drug a marked leucocytosis is observed as well as an increase in the number of red cells and the oxygen-bearing power of the cells is markedly increased.

"An important action of arsenic is to fix on nervous tissue which seems to become less irritable, and to diminish tissue waste produced by nervous overstimulation. Hence it is especially recommended not only in neurasthenia and chorea, but in tuberculosis, diabetes mellitus, Graves' disease, cancer of the stomach, leucocythemia and the grave anemias. Diabetes has been especially successfully treated with it, even in advanced cases.

"Concerning the employment of the cacodylate of sodium in tuberculosis it has been suggested by Gautier that in these cases there is an arsenic anemia analogous to the iron anemia in chlorosis, and upon this hypothesis the good results obtained are explained. In this as in other diseases it is recommended to employ the hypodermic method of administration, the tolerance being apparently increased by this method and the unpleasant effects frequently noticed when given by mouth, such as the allaceous odor, gastrointestinal irritation, etc., are obviated."

The author enters into the treatment of tuberculosis by zomotherapy; that is, "the raw meat treatment," and also the treatment of tuberculosis by urea.

"Down in Water Street." By Samuel H. Hadley of the old Jerry McAuley Mission. Published by Fleming H. Revell Co., New York, N. Y. Price, \$1.00.

This is a story of sixteen years of life and work in the Water Mission and is a sequel to the life of Jerry McAuley. The author, at one time a drunkard, was himself reclaimed by the originator of this first and great mission of rescued criminals. Mr. Hadley is a lineal descendant of the great Jonathan Edwards. The work of reclaiming drunken sots, degraded criminals and

² R. Paderstein, Inaugural Dissert., Heidelberg, 1900.

debauched women is replete with thrilling incidents. Besides it is a valuable study in methods of personal work with those who are lost in vice and villiany. The book contains over thirty half tone engravings of the different characters represented.

Nervous and Mental Diseases. By Archibald Church, M. D., and Frederick Peterson, M. D. Second Edition. 8vo. pp. 843. With 305 Illustrations. [Philadelphia: W. B. Saunders & Co. 1900. Price, cloth, \$5.00 net; sheep or half-morocco, \$6.00 net.

This book is a most excellent one; it supplies medical students and general practitioners with a reliable guide. The portion on nervous diseases was contributed by Dr. Church, whilst that on mental diseases is the product of Dr. Peterson's pen. Both are excellent and written in a clear and analytic style. In fact, unlike many text-books on these subjects, this one is very clear and excellent. In the part devoted to nervous diseases we note an absence of any discussion of the neuron theory. Dr. Peterson has handled the subject of mental diseases in a masterly manner. He does not attempt a definition of insanity, as he does not care to share in the unsuccessful efforts of other alienists in this feat, looked upon to day as being impossible. This is accepted to such a degree that one of the symptoms of insanity to-day is said to be the attempt to define the disease. In this part of the book the author has provided a large number of illustrations, not the least interesting of which are those representing the facial expressions of different mental diseases at different stages of their development. Equally interesting are his pictures of the different forms of idiocy, as well as of imbecility. They are all worthy of close study and observation.

The book is thorough, containing much that is not usually found in text-books. In fact, it partakes rather of the nature of a small treatise than of a text-book. The classification of nervous diseases is quite clear and founded upon a rational method. The same may be said of the classification of mental diseases. Both authors of this book have made it a point to eliminate obscurity from their text, and so written it that the ordinary practitioner, after study of its pages, will feel prepared and prove himself capable of going on the stand and testify as an expert. The authors have done their work well.

The book is a most excellent one and has been printed on an extra quality of paper. It is profusely illustrated with excellent as well as appropriate pictures. Quite a number of schematic figures are given and each one illustrates a point most clearly.

We desire to let our readers know that this is a well-made book and that the text is as good as the mechanical work is excellent. As a text-book it certainly leaves nothing to be desired, even by one well acquainted with his subject.

'Tween You An' I. Some Little Problems of Life, by Max O'Rell. Bound in blue cloth, decorative cover, rough edges, gilt top. Size, $5\frac{1}{2} \times 7\frac{3}{4}$. \$1.20, net. Lothrop Publishing Company, Boston.

This volume contains some of the choicest, wittiest, and most searching criticisms of life in general by this celebrated French writer and lecturer. His work has always a popular interest attaching to it, and there is no one who does not instantly find himself completely won over by the sparkling philosophy and wit of this most distinguished Frenchman. The book is comparable with the best that Jerome K. Jerome has ever written, and aside from that has a serious bearing upon Americanisms which cannot fail to be stimulating.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A., with the Collaboration of John B. Murphy, M. D., Chicago; Alexander D. Blackader, M. D., Montreal; H. C. Wood, M. D., Philadelphia; T. M. Rotch, M. D., Boston; E. Landolt, M. D., Paris; Thomas G. Morton, M. D., Philadelphia; James J. Walsh, M. D., New York; J. W. Ballantyne, M. D., Edinburgh, and Jno. Harold, M. D., London. With Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. J. B. Lippincott Company, Philadelphia and London. Cloth, \$2. Volume 2; 12 series.

International Clinics is a very welcome visitor to every physician's office. It is valuable for its exceedingly practical nature and for the closeness with which the reader is brought in relationship to the author, who poses in his contribution as the clinical lecturer would to the student. The present volume, which is volume 2 of the twelfth series, contains a number of very important articles, chief among which may be mentioned one on the treatment of acute urethritis by Professor Ernest Finger, Vienna; passive movements and massage for the treatment of fractures, by Professor Lucas

Championniere, of Paris; treatment of simple ulcer of the stomach, by Dr. Albert Robin, of Paris. Various other excellent articles, by equally distinguished physicians, add much to the excellence of the volume.

The number of beautiful illustrations in this volume exceed those in any of the former volumes. There is no doubt that this volume will maintain the leading position established by the numerous editions that have preceded it.

The Practical Medicine Series of Year Books, comprising ten volumes on the year's progress in Medicine and Surgery issued monthly under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IX. Physiology, Pathology, Bacteriology, Anatomy. Pathology, edited by W. A. Evans, M. S., M. D., Professor of Pathology, College of Physicians and Surgeons, Chicago; Bacteriology, edited by Adolph Gehrman, M. D., Professor of Bacteriology, College of Physicians and Surgeons, Chicago. The Year Book Publishers, 40 Dearborn St., Chicago, August, 1902.

We take pleasure in calling the attention of our readers to this excellent series constituting the most convenient reference books. The idea is to be commended as the different subjects are treated of in different volumes. Every volume so far issued has proven admirable, and will prove invaluable as reference books.

Dudley's Gynecology. A treatise on the Principles and Practice of Gynecology. By E. C. Dudley, A. M., M. D., Professor of Gynecology in the Northwestern University Medical School, Chicago. New (3d) edition. Enlarged and thoroughly revised. In one very handsome octavo volume of 756 pages, with 474 engravings, of which 60 are in colors and 22 colored plates. Cloth, \$5.00, net. Leather, \$6.00, net. Half morocco, \$6.50 net. Lea Brothers & Co., Philadelphia and New York.

Dr. Dudley has furnished a complete and trustworthy exposition of modern gynecology, the demand for a third edition of which must be taken as very satisfactory evidence of the esteem in which the volume is held. The marked success of the work is owing to its reduction of gynecology to a rational basis and its consequent simplification of the subject. Its arrangement is original and admirably natural, and in its completeness and thoroughness the work is encyclopedic.

The new edition shows not only a thor-

ough-going revision in both text and illustration, but by judicious pruning of older matter it has been found possible to add nearly one hundred pages, 25 new engravings and 14 plates without considerably increasing the very convenient size of the volume, nor its very moderate price.

The second edition was repeatedly commended as "the best treatise on gynecology extant. The present edition is in many ways an improvement upon the second.

Typhoid Fever. By J. T. Moore, M. D., M. C. P. S., Professor of Theory and Practice of Medicine, Medical Department of Hamline University, Minneapolis, Minn. Pages 159. Price, \$1.00, net. G. P. Engelhard & Co., Chicago, 1902.

This is the collections of the most valuable conclusions both medical and surgical touching upon this important disease. The bringing together in such a practical and brief way, makes a volume of great value to the ordinary practitioner. The writer often draws on his own experience which has been long and extensive. A careful examination of this volume impresses us very favorably, and we propose to refer to it quite often.

A Text-Book of Materia Medica, Therapeutics, and Pharmacology. Fourth Edition, Thoroughly Revised. By George F. Butler, P. G., M. D., Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons, Chicago, Medical Department of the University of Illinois, etc. Handsome octavo volume of 896 pages, illustrated. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$4 00 net; Sheep or Half Morocco, \$5.00 net.

The new edition of this commendable work is offered to the profession after a careful and complete revision. The pharmacology and therapeutics of each drug have been thoroughly revised, incorporating all the recent advances made in pharmacodynamics.

In view of a larger experience, resulting in more definite conclusions, numerous modifications have been made in the expressions of opinion regarding the utility of certain drugs, notably the newer synthetics. The chapters on Organotherapy, Serum-therapy, and cognate subjects have been enlarged and carefully revised.

But perhaps the most important addition is the chapter on the newer theories of electrolytic dissociation and its relation to the topic of pharmacotherapy, and the relevant discussion added of the simpler relations of chemical structure to drug-action. The profession will undoubtedly greet most cordially this new fourth edition of a work

supplying the student of medicine with a clear, concise, and practical text-book, adapted for permanent reference no less than for the requirements of the classroom.

A Text-Book of the Surgical Principles and Surgical Diseases of the Face, Mouth and Jaws. For Dental Students. By H. Horace Grant, A. M., M. D., Professor of Surgery and of Clinical Surgery, Hospital College of Medicine; Professor of Oral Surgery, Louisville College of Dentistry, Louisville. Octavo volume of 231 pages, with 68 illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$2.50, net.

This text-book designed for the student of dentistry, succinctly explains the principles of dental surgery applicable to all operative procedures, and also discusses such surgical lessons as are likely to require diagnosis and perhaps treatment by the dentist.

The arrangement and subject matter covers the needs of the dental student without encumbering him with any details foreign to the course of instruction usually followed in dental colleges at the present time. The work includes, moreover, such emergency procedures as not alone the dentist and physician, but also the layman may be called upon to perform. These, like the other subjects in the book, have been described in clear, concise language, admitting of no unequivocalness. Whenever necessary, for the better elucidation of the text, well-selected illustrations have been employed. For the dental student the work will be found an invaluable text-book; and, indeed, the medical beginner, also, will find its perusal of more than passing benefit.

The Treatment of Fractures. By Chas. L. Scudder, M. D., Assistant in Clinical and Operative Surgery, Harvard Medical School. Third Edition, revised and enlarged. Octavo, 480 pages, with 645 original illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Polished Buckram, \$4.50 net; Half Morocco, \$5.50 net.

This book is intended to serve as a guide to the practitioner and student in the treatment of fractures of bones, being a practical statement of the generally recognized methods of dealing with fractures. The attention of the student is diverted from theories to the actual conditions that exist in fractured bones, and he is encouraged to determine for himself how to meet the conditions found in each individual case. Methods of treatment are described in minute detail, and the reader is not only told, but is *shown*, how to apply apparatus, for as far as possible, all the details are

illustrated. This elaborate and complete series of illustrations constitutes a feature of the book. There are 645 of them, all from new and original drawings and reproduced in the highest style of art.

In this edition several new fractures have been described, and an excellent chapter on Gunshot Fractures of the long bones has been added. The reports of surgeons in the field during the recent wars have been carefully digested, and the important facts regarding fractures produced by the small caliber bullet have here been concisely presented. In many instances photographs have been substituted for drawings, and the uses of plaster-of-Paris as a splint material have been more fully illustrated. In its new form, the work fully maintains the deserved reputation already won.

The International Text-Book of Surgery. In two volumes. By American and French Authors. Edited by J. Collins Warren, M. D., LL.D., F. R. C. S. (Hon.), Professor of Surgery, Harvard Medical School; and A. Peare Gould, M. S., F. R. C. S., of London, England. Second edition, thoroughly revised and enlarged. Vol. I. General and Operative Surgery. Royal octavo of 965 pages, with 461 illustrations, and 9 full-paged colored lithographic plates. Vol. II. Special or Regional Surgery. Royal octavo of 1123 pages, with 499 illustrations, and 8 full-paged colored lithographic plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$5.00, net; Sheep or half Morocco, \$6.00, net.

In planning this work the editors and co-workers have kept constantly in mind the needs of both student and practitioner. The result—a masterly exposition of the art and science of surgery, untrammelled by antiquated traditions. In its realization they have given to medical literature an invaluable text-book, embodying a clear but succinct statement of our present knowledge of surgical pathology, symptomatology, and diagnosis, and such a detailed account of treatment as to form a reliable guide to modern practice. In this new edition the entire book has been carefully revised, and special effort has been made to bring the work down to the present day. The chapters on Military and Naval Surgery have been very scrupulously revised and extensively re-written in the light of the knowledge gained during the recent wars. The articles on the effect upon the human body of the various kinds of bullets, and results of surgery in the field are based on the latest reports of the surgeons in the field.

The chapter on Diseases of the Lymphatic System has been completely re-written and brought up-to-date; and of special interest is the chapter on the Spleen.

The already numerous and beautiful illustrations have been greatly increased, constituting a valuable feature, especially so the seventeen colored lithographic plates. The work is excellent; we know of none to surpass it. It is clear, concise, and up-to-date.

Saunders' Question Compend. Essentials of Histology. By Louis Leroy, B. S., M. D., Professor of Histology and Pathology, Vanderbilt University, Medical and Dental Departments; Pathologist to the Nashville City Hospital, etc. Second Edition, thoroughly revised and greatly enlarged. 16 mo. volume of 263 pages, with 92 beautiful illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$1.00, net.

This valuable work has been designed not only as an aid to the beginner, but also to help the practitioner who, having graduated at a time when histology was not taught in all the colleges, desires to gain sufficient knowledge of the subject to facilitate his better understanding of pathology. Both these aims it admirably fulfils, as is evidenced by the demand for a second edition in so short a time.

In this edition a number of new original illustrations, most photomicrographs, have been inserted to better elucidate the text. The chapter on Technic has been enlarged, a description of the appendix and rectal valves added, and the entire chapter, as, indeed, the entire book, thoroughly and carefully revised. As did the first edition, the work in its present form stands as a model of what a student's aid should be; and we unhesitatingly say that the practitioner as well would find a glance through the book of lasting benefit.

Saunders' Medical Hand-Atlases. Atlas and Epitome of Traumatic Fractures and Dislocations. By Professor Dr. H. Helferfer, Professor of Surgery at the Royal University, Griefswald, Prussia. Edited, with additions, by Joseph C. Bloodgood, M. D., Associate in Surgery, Johns Hopkins University, Baltimore. From the fifth revised and enlarged German edition. With 216 colored illustrations on 64 lithographic plates, 190 text-cuts, and 353 pages of text. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$3.00 net.

This worthy addition to Saunders' Series of Hand-Atlases will be found of inestimable value in facilitating the student's introduction to the important department of

fractures and dislocations, and as a ready reference book for the use of physicians in general practice. This department of medicine being one in which, from lack of practical knowledge, much harm can be done, and in which in recent years great importance has obtained, a book, accurately portraying the anatomic relations of the fractured parts, together with the diagnosis and treatment of the condition, became an absolute necessity. The work before us fully meets all requirements. As complete a view as possible of each case has been presented, thus equipping the physician for the manifold appearances that he will meet with in practice.

The author has brought together in this work a collection of illustrations unrivalled for accuracy and clearness of portrayal of the conditions represented, showing the visible external deformity, the x-ray shadow, the anatomic preparation, and the method of treatment. We have no doubt that the book will be received with the favor it demands, filling, as it does so admirably, a want long felt.

Saunders' Question Compend. Essentials of Diseases of the Ear. By E. B. Gleason, S. B., M. D. Clinical Professor of Otolaryngology, Medico-Chirurgical College, Philadelphia; Surgeon in Charge of the Nose, Throat, and Ear Department of the Northern Dispensary, Philadelphia, etc. Third Edition, Thoroughly Revised. 16 mo. volume of 214 pages, with 114 illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$1.00 net.

This valuable little help, one of Saunders' Question-Compend Series, has reached its third edition. The book will be found of service, not alone as an aid to the student, but also to the physician who wishes to take a post-graduate course in Otolaryngology, enabling him, as it does, to acquire the rudimentary facts of the science with as little preliminary reading as possible.

The essentials of Otolaryngology have been stated concisely, without sacrificing accuracy to brevity. The diagnosis and treatment of diseases of the ear have been brought absolutely down to date by a thoroughly scrupulous revision; only such methods of treatment being included, however, that have personally proved efficacious in the majority of cases. Besides carefully revising the old text, many interpolations of new matter have been made, thus somewhat increasing the number of pages in the present edition.

The illustrations—many from original drawings—have been selected with the aims of the book constantly in view; and they form a very commendable feature of the

work. Indeed, the little volume before us will unquestionably continue to be one of the most popular of Saunders' unequalled Question-Compend Series.

LITERARY NOTES.

The reappearance of the author of "The Workers" marks the September number of Scribner's Magazine. When Walter A. Wyckoff began that narrative every newspaper of importance in the country commented on his remarkable experiment. Last Summer Mr. Wyckoff transferred the field of his investigations to England. At the same time that Mr. Vanderlip was investigating the financial and commercial conditions for the magazine, Mr. Wyckoff was studying the social effects of the American Invasion upon British workmen. Having been a workman himself, and moreover having the training of a scientific student of social questions, he was able to gather and, in his first article, to present with vigor the London Wage-Earner's present conditions and prospects. This introductory article will be a revelation to those who look on East London as a vast slum. Mr. Wyckoff found there a clean, orderly, self-respecting and progressive body of wage-earners, ready to compete intelligently with the American workman. More of Mr. Wyckoff's remarkable deductions will be published in coming numbers.

If any publication in this country epitomizes modern progress, it is the Review of Reviews. The September number of that enterprising magazine interprets significant changes in American social and industrial life in a masterly way. Little can be added to its summaries of the wonderful crop statistics of the present season, while the nation's advance in manufacturing and in the solution of economic problems is graphically described. Altogether, the September Review of Reviews is a sort of marker in America's industrial development for the year 1902.

Electro-Therapeutics, Radiography, Thermo- and Hydro-Therapeutics are practically and thoroughly covered in the Journal of advanced Therapeutics (800 pages, issued monthly, \$3 per year.) The reader is invited to join the "Founders' Club, and to all who order during 1902 the price is \$2 for the first and *each succeeding* year. It is only requisite that you address following order to "Advanced Therapeutics," 156 Fifth Ave., New York. Send me until countermanded (to Dec. 1902 free) the journal commencing Jan.

1903, per year \$2, for which I will pay at the close of the year.

THE SEPTEMBER LIPPINCOTT'S MAGAZINE.—Ellen Olney Kirk's new novel is published entirely in the September number of Lippincott's Magazine, issuing August 21. It is a comedy particularly suited to lazy early-autumn days when readers want sauce piquante served as well with literary food as with every-day meals. The story is American, with a heroine "exquisite beyond all women!" Having at stake a fortune, she carries out an original scheme to marry the man she loves. Humor is paramount, and the plot stimulates, while that same charming human sentiment is evident which characterized Mrs. Kirk's earlier success, "The Story of Margaret Kent."

Besides the complete novel Lippincott's has a fine showing of short stories: Josiah Flynt contributes "The 'Won't Go Home,'" which is a rattling good tale of a steam calliope and a party of speculators in the far Orient. Ina Brevoort Robert's name in the list leads one to expect something extraordinarily good, remembering that she is the author of "The Lifting of a Finger." Her present story, "The Fifth Wheel," fully justifies this hope. "The Hidden Man," by Karl Edwin Harriman, is a first-rate story of a Western tramp, treated with vigor. The extreme pathos of Jennette Lee's story is offset by a happy ending. Its title, "A Judgment on Them," refers to a man and wife who dwell under one roof but who have not spoken to each other for ten years. A Mormon story by Lily Munsell is called "The Undoing of Apostle Jones." The underlying tragedy is brightened by a fourth wife's determination to see fair play. Albert Payson Terhune writes a tale about honor on a newspaper. This is entitled "A Park Row Galahad," and is an instance where a reporter learns that he "cannot serve two masters." It holds the interest throughout.

Eben E. Rexford always gives seasonable points on the subject of his specialty—gardening in all its branches. In the September Lippincott's he takes Time by the forelock in writing about "Fall Work in the Garden." He tells just the things people want most to know at this season, and tells them clearly and untechnically.

Two notable poems by Marie Van Vorst head the list of verse in the September Lippincott's. They are "Where Are You, Dear?" and "The Rose." Besides these there are contributions by Florence Earle Coates, "Who Knocks?" by L. H., "In Memoriam;" by Alice E. Allen, "Home-sick;" by Mary Applewhite Bacon, "So

Strong is Love;" by William Hurd Hill-
 yer, "The Midnight Mail;" by Philip
 Becker Goetz, "Lone Singers;" by George
 S. Seymour, "Canute;" and by Adolphus
 Coll, "The Echo." The "Walnuts and
 Wine" department is bristling as usual
 with fun.

ABSTRACTS of the Leading Articles of the Month.

Unrecognized Syphilis in General Prac- tice.

Burkley, in the International Medical
 Journal, makes the following points:

1. Syphilis is certainly a venereal disease
 in all cases, and the absence of any history
 of sexual exposure should never throw one
 off the guard, when there is reasonable evi-
 dence of the disease. In addition to the
 large number of instances of innocent mar-
 ital and hereditary syphilis, there are cer-
 tain number of cases of extra-genital chan-
 cre which must always be reckoned on
 when confronted with possible syphilis.
 Among a large number of cases of chancre
 which I collected from the clinics of Eu-
 rope, extra-genital chancre was found to
 make nearly 6 per cent. among the males
 and almost 12 per cent. among the females.
 Fournier, of Paris, found that in his prac-
 tice about 25 per cent. of the females had
 acquired the disease in a perfectly innocent
 manner, while in my own private practice
 a careful study of the notes of cases shows
 that in 50 per cent. of females syphilis was
 innocently acquired. Allusion has already
 been made to the fact that in my experi-
 ence extra-genital chancre is more common
 in males than in females.

Treatment of Phthisis with Blue Light.

G. Kaiser, in the British Medical Journal,
 writes that his attention was called to the
 bactericidal action of pure blue light by the
 fact that he was advised to treat his own
 hand (which showed a septic ulcer due to
 infection from a suppurating case) by this
 method. The author made investigations
 and obtained the following results: (1) Tubercle bacilli in pure culture were killed
 in thirty minutes by the blue light at a dis-
 tance of 5 metres, while they survived the
 equal illumination by an ordinary arc lamp.
 (2) Tubercle bacilli in pure culture were
 pasted on a patient's back, and the blue
 light was directed on to the patient's chest
 at a distance of 5 metres for thirty minutes;
 this was repeated for six days. The bacilli
 were "weakened." (3) Pure culture of
 tubercle bacilli were illuminated by a light
 concentrated through a hollow lens con-
 taining a solution of alum and methylene

blue with ammonia; they were killed.
 (4) The same lens was used, and the light
 was split up into the spectral colours by
 means of a carbon disulphide prism. Cul-
 tures lived in red and yellow light, but
 were killed in from blue-violet to ultra-
 violet. (5) A photographic negative with
 an unused film was pasted on a patient's
 back in such a way that all light was ex-
 cluded. The film was illuminated through
 the patient's body, and a blurred "positive"
 was obtained. Following these experi-
 ments, Kaiser tested the blue light on pa-
 tients. Two cases of advanced phthisis;
 after six days night-sweats ceased and cough
 became less. After six weeks (up to the
 present) diminution of bacilli in sputum.
 A case of tuberculous abscesses in the thigh
 and knee flexion; all treatment that had
 been applied before (for three months)
 failed to do any good. Result of blue
 light—healing of all abscesses in four
 weeks. A case of "weeping" eczema in a
 child of "tuberculous character"; cure in
 five weeks. He concludes that (1) blue
 light kills tubercle bacilli; (2) the heat
 rays are excluded by the hollow lens with
 cooling arrangement; (3) action of the
 light is dependent on the distance and in-
 tensity of the source of light; (4) the light
 can pierce the body sufficiently strongly—
 only the chemical rays do so; (5) pure blue
 light acts strongly as a resorbing agent;
 and (6) blue light has a local sedative ac-
 tion if the rays are concentrated, and may
 even produce anæsthesia.

The Treatment of Vesico-Vaginal and Recto-Vaginal Fistulae High Up in the Vagina.

Kelly, in the Bulletin of Johns Hopkins
 Hospital, states that when, in the course of
 vaginal hysterectomy for carcinoma of the
 cervix, the bladder is wounded—either ac-
 cidentally or with intention—the resulting
 fistula is often difficult to close. The diffi-
 culty arises partly from the distance of the
 fistula from the vaginal orifice, and partly
 from the close proximity of scar tissue in
 the vaginal vault. These difficulties can
 best be overcome by opening the peritoneal
 cavity widely from side to side through the
 vaginal roof; when this has been done, the
 bladder can be separated from adjacent
 structures, and brought within easy reach.

For the performance of this operation the
 patient is placed in the genu-pectoral pos-
 ture. The advantages of this position are:

1. The bladder becomes spontaneously
 distended with air through the fistula open-
 ing.
2. Blood, which may escape, runs down
 into this viscus and does not obscure the
 field of operation.

3. When incised, the vesical and vaginal tissues tend to fall away from one another in different planes.

The peritoneum is first opened widely from side to side, by cutting through the scar in the vaginal vault. Air enters the abdominal cavity, and the viscera fall towards the diaphragm. A gauze pad, attached to a stout thread, is now introduced through the incision. By pulling upon this thread, the bladder may be drawn down towards the vaginal orifice, whilst at the same time the peritoneal cavity is protected. The tissues at the margin of the fistula are split, the vaginal and vesical walls being separated from one another. The edges of the bladder wall are united by catgut sutures, the stitches passing only through the muscular coat; in this way a little buttress of vesical tissue is turned up into the bladder.

The vaginal surfaces are also united by a row of fine silkworm gut sutures; these may be continued up to the peritoneal surface of the bladder, thus securely closing the upper part of the fistula, which under previous methods of treatment was least likely to heal. When the fistula has thus been closed, the pad of gauze is withdrawn, and the peritoneal cavity filled up with saline solution to expel the air. The patient is then turned into the dorsal position and the fluid escapes. The vaginal wound is partially closed, a gauze drain inserted, and a catheter left in the urethra for from seven to nine days.

The same method may be adopted in cases of recto-vaginal fistula. Douglas's pouch is widely opened through the posterior vaginal fornix; in this way the mobility of the bowel is greatly increased. The vagina is completely separated from the rectum, the latter infolded and sewn up separately in one or two layers. The vaginal wound over the bowel is not closed, but left to heal by granulation.

Massage and Movements in Hemiplegia.

Graham (Edinburgh Medical Journal) states that the benefits which may result from massage, in disturbances arising from morbid changes in the central nervous system, will depend more on the nature of these changes than on the merits of the treatment. It is difficult to determine the class of cases in which the use of massage at the commencement is judicious. If it is abstained from until the perturbation in general has subsided, while thus waiting to spare the nerve centers any supposed extra commotion, peripheral pathological changes are gaining ground, which later may only be imperfectly overcome. In the writer's experience, in the absence of severe pain,

obstinate contracture, or tonic spasms, this agent has proved useful in improving the circulation, temperature and comfort of the parts affected. When recovery follows under manipulation, we had previously supposed that the central disturbance had entirely passed away, and that the force of habit was the main factor that continued the external manifestations of inaction, and thus massage would have served a useful purpose for diagnosis as well as treatment. But more recent experiences and opinions teach us that it is possible, by means of massage and gymnastics, to educate other parts of the brain to take the place of the injured ones by arousing psychomotor impulses in the formation of new associations and combinations; so that we may no longer regard paralysis of either central or peripheral origin from the hopeless view that we formerly did. When the causative conditions have ceased, paralysed muscles will not at once resume their former natural condition. Massage, passive and resistive movement, will enable them to do so, and at the same time will afford the *only* means of judging of the capabilities of the patient, and of telling him how to use them. Massage, if used early, will diminish the evils of inactivity upon the circulation and nutrition, and keep the muscles in a state of readiness for voluntary contraction. The theory by which one part of the brain can take the place of another when diseased has been formulated by Broadbent somewhat as follows: Movements are represented in the opposite hemisphere in proportion as they are unilateral, in both hemispheres in proportion as they are bilateral, in execution. Either hemisphere can excite the bilateral movement, but only the opposite can excite the unilateral ones. Movements rather than muscles are represented in the hemispheres and are lost in disease. Lateral movements by muscles of both sides are represented in both hemispheres, but in a normal state they are chiefly effected by the opposite hemispheres. When this is diseased, they are impaired until the hemisphere on the same side has acquired functional power over them through mechanisms before existing but unused. We know that a man can get along very well with one ear, one eye, or one testicle, and it would be rather remarkable if one side of such a vastly more important organ as the brain should not be capable of supplementing injury to the other, or doing the work of both.

Suprarenal Extract in Cardiac Conditions.

Deeks (Montreal Medical Journal) describes two cases in which he used the suprarenal extract. The first case was a female patient, eighty-two years of age, suffering from

the symptoms of dilatation of the heart. The cardiac action was weak and irregular, the legs much swollen, the œdema persisting in spite of rest in bed. The diagnosis was myocarditis, mitral incompetence and arterio-sclerosis. All the usual remedies had been tried with no benefit. Vomiting set in, and the patient's condition became extremely serious. Suprarenal extract in three-grain doses was ordered, and from the first day a marvellous improvement was observed. The vomiting ceased, the swelling disappeared, and the patient was soon able to walk. The heart's action became regular, and the patient was better than she had been at any time during the preceding three years. She took from nine to eighteen grains of the extract each day. The second case was a man seventy-six years of age, with œdema of the legs, heart regular but rapid, with weakness of the first sound. Under the use of suprarenal extract, the œdema entirely disappeared in six weeks, and the heart's action much improved. In both of these cases the extract had only been given as a last resource, the usual cardiac tonics having failed to effect any improvement. These results are somewhat remarkable, in view of the known action of this remedy in raising arterial blood pressure, since with a weakened myocardium and degenerate vessels one would rather have expected unfavorable results—either a rupture of the blood-vessels, or fatal syncope from over-strain of the cardiac musculature.

Pylorectomy Performed in Two Stages.

Gordon (Medical Press and Circular) reports a case of pylorectomy performed in two stages. The patient a man, aged 43, had suffered from vague gastric symptoms for about twenty months. The pain was never severe, nor was vomiting constant. He had lost 21 lbs. in weight during the last four months.

A tumour was to be felt in the abdomen just above the umbilicus; it measured about three inches in transverse diameter, was hard and irregular, and could be felt to move readily with respiration. It could be moved freely in all directions. There was no liver enlargement; and this together with the remarkable mobility of the tumor led to the hope that there was an absence of adhesions and of secondary cancer deposits. An incision was made slightly to the left of the middle line. A hasty examination of the tumour justified the hope that had been entertained. The transverse colon was turned upward and posterior gastro-enterostomy performed. The opening in the stomach was made as far to the left as possible, after the method of Roux. The je-

junum was divided some distance from the duodenal flexure, the lower end was fixed to the stomach opening, and the upper end was made to anastomose with the jejunum again some four inches or more from the stomach junction. Simple suturing was used throughout. The abdomen was then closed. The course of the case was satisfactory; there was little or no shock, and the patient only vomited once. By the ninth day he was able to take solid food. Twenty-five days after the gastro-enterostomy the abdomen was again opened in the middle line by an incision five inches long. When the stomach region was exposed, an opening was made in the lesser omentum in order to explore the posterior aspect of the tumor. A Doyen's clamp was placed across the duodenum, which was cut across, and the end at once sewn up by a double row of silk sutures. The stomach was then cut across between clamps placed well beyond the apparent limits of the growth, and the opening closed up by a double row of silk sutures.

There was very little loss of blood during the operation, which lasted one and three-quarters of an hour. The excised portion of stomach showed a considerable narrowing of the pylorus by a growth which proved to be a columnar celled cancer. The patient's condition for some days after the operation was a precarious one. His temperature went to 102 deg. F. and his pulse to 160 on one occasion. On the fourth day a free discharge of bilious fluid occurred from the bottom of the first incision; but the general condition of the patient improved. At the end of the first week a considerable increase in the nourishment was risked, and it was found that he could take four pints of peptonised milk in the day without any discomfort. Steady improvement took place, and the patient gained 12 lbs. in weight in four months.

The writer discusses the question, "Is pylorectomy under any circumstance legitimate?" and comes to the conclusion that it is, provided the operation can be performed early. His conclusions are as follows:

1. The present position of pylorectomy is unsatisfactory, but there is no cause for despair.

2. That an advance may be made, it is, in the first instance, necessary to *reduce the immediate mortality*. This is to be done by (a) a more careful selection of cases, and (b) by performing the operation in two stages. In the second place it is necessary to *obtain better ultimate results*. The way to this end lies in (c) wider resections, and (d) in this case also in better selection of cases.

3. Let these things be accomplished and we may then, with more justice than at present, call upon physicians to resort more frequently to exploratory operation.

Signs on the Skin of Certain Common Diseases.

J. Galloway in the Brit. Med. Journ., describes the more important cutaneous affections, occurring in common diseases.

1. *Renal Disease*.—Various evanescent affections, such as sweat eruptions, may occur in Bright's disease. Most of these are of no serious importance. Another lesion is not common, and resembles erythema multiforme. This generally indicates serious renal and blood changes. It usually ends in desquamation, which may be severe. On the other hand, when in cases of acute exfoliative dermatitis renal disease develops the prognosis is generally fatal.

2. *Diabetes*.—The skin of diabetic patients is easily infected by pyogenic micro-organisms, which cause boils and carbuncle. There are two other conditions to which the diabetic patient is liable—(1) *Seborrhæic Dermatitis*: This occurs in the form of scaly and erythematous patches in middle-aged stout people. It may lead to eczema. Such cases improve when the cause is recognized and the diet altered.

Locally, medicated baths are useful—bran, alkaline, or tar. Sulphur baths are also useful. After the bath calamine lotion should be applied, with $\frac{1}{2}$ to 1 per cent. carbolic acid if there is much pruritus.

(2) *Dermatitis of the Genitalia*: This is caused by contact of sugary urine with the skin and fermentative changes in the sugar. In the male there may be balanitis and swelling of the prepuce, leading to phimosis. The retained decomposed urine in the prepuce causes ulcers, which may be mistaken for chancroids. Treatment consists in washing out the prepuce with warm mild antiseptics. The prepuce must be gradually retracted, and treatment continued till the inflammation is cured. In females, owing to the larger surface, the disease is more severe. There may be an eczematous inflammation about the vulva, spreading to the thighs and abdomen; more commonly it is subacute. There is much pruritus, and the labia may become cracked or may undergo a gradual shrinking. Treatment consists in the use of warm baths—bran or alkaline—after which lotions of carbolic acid and glycerine are useful. The general disease must, of course, be treated by proper diet, etc.

3. *Disorders of Circulation*.—Certain persons have a flushed appearance of the hands, associated with a sensation of cold.

No organic heart disease can be found, but the capillaries are distended, and have very little power of contraction. The cause seems to be a "fixed condition of depression of the vaso-motor impulses," causing flooding of the vessels of the skin. These persons suffer from chilblains, which may ulcerate. Another condition is a blotched hyperæmia, of dependent parts, resulting in pigmentation. Slight injuries may cause serious damage in such cases, and may lead to ulcers, which may be mistaken for syphilis or tubercle.

These circulatory lesions have a resemblance to certain "*tuberculides*." The latter, the knowledge of which is incomplete, have two main characteristics: (1) Passive localized congestion; (2) cellular infiltration. These conditions result in necrosis of the skin, with a small scar or deep ulcers when the infiltration is large. Examples of the first are acne, scrofulosorum, and increasing dermatitis of the extremities; of the second, erythema, induration, or Bazin's disease. The tuberculides are probably examples of chronic non-virulent tuberculosis. They are difficult to distinguish from the circulatory lesions mentioned above, especially as the feeble circulation in the latter seems to occur in persons suffering from tuberculosis or prone thereto.

Treatment of patients with circulatory disease chiefly concerns the nutrition, combined with careful attention to the skin and the use of warm clothing and tonics.

The Alexander Operation.

Cleveland (American Gynecology, July, 1902) describes the technique of the Alexander operation which he holds is not really difficult if the essential points are kept in mind. The main thing is to reach the external ring gradually without mutilating the tissue—that is with a clean cut from the surface to the ring. The incision is made through the integument of the desired length. After this and only then, is the locating of the ring of importance. It can usually be found by the touch, from the sense of the lesser resistance than the surrounding structures, just above and to inside of Poupart's ligament. Once found, the location must be kept in mind as the incision is carried downward. In thin women it is usually necessary merely to draw firmly upon the retracting sutures to enable the operator to cut directly through with one or two strokes of the knife to the aponeurosis. When there is a great deal of fat, the operator and his assistant each grasp the bottom of the wound with a tooth forceps and the cut is made between these. This procedure is repeated until the aponeurosis is reached.

eurosis is reached, the exact location being taken before each stroke of the knife. This is the whole secret to the first step of the operation, cutting accurately and rapidly to the aponeurosis of the external oblique. One point that he especially emphasizes is the strengthening of the attachment of the ligament in the canal by including in the first suture of the pouch of the peritoneum called the infundibuliform process. It not only strengthens the attachment of the ligament but adds to the support of the uterus by taking in a fold of the peritoneum, though it is a small one, and it more completely fills the inguinal canal and makes an external shortening of both the round and broad ligaments, not, of course, of the whole broad ligament near the internal ring. The writer thinks the danger of including a knuckle of the intestine in the suture is minimal and he also makes use, to some degree, of the Trendelenburg position, which should ensure against this risk. It is most important to find and isolate the genital branch of the genito-crural nerve and avoid cutting it or including it in the suture. We must be absolutely sure of the suture material and he thinks nowadays the carefully sterilized iron-dyed silk the best. The author believes in the use of rubber gloves in the operation. The advantages of operation as compared with other methods are that it is just as likely to be successful and is free from danger. The wounds are very short, and not prominent; the scar is sometimes hard to find. Cleveland does not believe in the vaginal method except in married women who have borne children.

Some Points in the Treatment of Acute Rheumatism.

W. H. Thompson (Medical News, Aug. 23, 1902) believes that the sudden cold caused by evaporation from a finely-divided moisture on the skin of a rheumatic patient may at any time initiate a pleurisy or a pericarditis (or aggravate either if present) as certainly as any influence that can be named. All patients with rheumatic fever, therefore, should be jealously dressed in flannel and lie between blankets from the very first, and extra precautions should be taken with the pericardial surface for the same reason. Soothing liniments with abundant dry dressings should likewise be provided for the inflamed joints. He states that a sedulous attention to the skin would prove a much better preventive of tedious relapses than dosing with drugs, and as a prophylactic to susceptible persons he thinks highly of the custom of daily bodily inunctions, especially of the feet. With reference to the cardiac implications, he is strongly of the opinion that the modern dis-

placement of treatment with alkalies by the salicylates has been followed by greater frequency of heart troubles. The alkalies are certainly no cures for rheumatic fever, but a faithful dosing with them till the urine is made alkaline, and stays so, is a safeguard against carditis, and we never should fail to prescribe them as soon as the least sign of impending heart trouble develops. Together with this and all through the course of the disease, as long as the pulse remains quiet, he gives aconite as there is no remedy so serviceable both for the onset of cardiac inflammations and for the prolonged irritability of this organ which follows a rheumatic fever. Rest is the chief indication for the heart now and a necessity which may continue for months, and aconite is the best medicine for securing it.

As to the compounds of salicylates Dr. Thompson believes that they stand in no need of recommendation. Their introduction marked a great gain in the therapeutics of rheumatic fever, particularly in acute cases, with only the usual drawback that their efficacy has tended to their employment in a routine fashion. Like all really good remedies they call for discrimination. Thus, the sodium salt which is most in use has the disadvantage of causing serious prostration in some patients when given in full dose, and he thinks that it occasionally increases the specific effect of the rheumatic toxin in causing mural weakness by the softening of the heart muscle. Now and then also it causes delirium, which is a disquieting symptom in acute rheumatism. His choice is for the strontium salt as less depressing and of equal efficacy when given in the same dose. Many do best, especially quite young subjects, with salicin itself in doses of 15 to 20 grains. In tedious subacute cases it is often advantageous to omit the salicylates altogether and prescribe lemon juice instead.

Treatment of Gonorrhoea.

Swinford Edwards, in the London Lancet, recommends abortive treatment, if the case is seen early, when there is only redness of the meatus and mucoid discharge. For this the writer uses either perchloride of mercury (1 in 2,000), 2 per cent. mercuriol, or nitrate of silver (10 grains to 1 ounce), applied through a urethroscope after cocaine. In the acute stage the patient should drink large quantities of fluid, barley-water, etc. Where copaiba, cubebs and santal oil disagree, methylene blue, urotropin, or salol may be tried. Injections are not advised in the acute stage. When pain on micturition has ceased, local

treatment may be begun. When the disease is limited to the anterior urethra, injections may be used: sulphate of zinc, 1 grain to 1 ounce; permanganate of zinc, $\frac{1}{4}$ grain to 1 ounce; silver nitrate, $\frac{1}{4}$ grain to 1 ounce; protargol, 1 to 2 per cent.; mercuriol, $\frac{1}{2}$ to 2 per cent. He is in favor of the last drug. When the posterior urethra is involved, Janet's irrigation method is advised, performed night and morning with permanganate of potash (1 in 6,000). The anterior urethra is first irrigated, then the posterior urethra and bladder.

In chronic gonorrhœa or gleet an examination should be made with the inflating urethroscope. When a gleet has lasted for six months, stricture should be examined for by Otis' exploring bougies. Granular patches are usually met with in the bulbous urethra, and can be treated with nitrate of silver. Warty growths should be curetted, and follicular abscesses treated by intra-urethral incision or electrolytic puncture. For chronic posterior urethritis the following methods may be tried: The passage of large steel sounds, electrolysis, irrigation, and instillations of silver nitrate. He prefers the last two methods. For chronic prostatitis or vesiculitis the author practices massage *per rectum*.

Diphtheria.

Frederic S. Palmer (Medical Press and Circular) sums up the treatment of diphtheria under the heads of hygiene, local, general, and prophylactic. The first of these, isolation either in hospital or in a separate room set aside for the purpose should be practiced. All unnecessary furniture and hangings should be removed. Free ventilation is to be maintained by opening the window at regular intervals. A nurse or nurses should be provided, and no unnecessary communication held with the rest of the household. On the termination of the illness, thorough disinfection of the apartment and its contents must take place. As regards the local treatment, the remedies suggested for internal application are antiseptics, solvents, and astringents. If local remedies are adopted, they should be carried out by experienced hands two or three times a day. If in very young children the local application produces much distress or terror, it is wiser not to pursue it; the resistance offered is trying to witness, and the efforts of the child are attended with great exhaustion. As regards general treatment, a full dose of antitoxin should be administered as soon as possible. At Great Ormond Street 3,000 units are given to quite young children, and the dose repeated in

twenty-four hours if the membrane exhibits any tendency to spread. In severe cases and in older children it is better to commence with 6,000 units, and to repeat it the next day if no improvement takes place. The amount does not seem to be important provided that a sufficiency is given. The diet should be light and nutritious and given at short intervals. The patient should be kept in bed for three weeks, and not allowed to sit up for any purpose. If the disease spreads to the larynx, intubation or tracheotomy may be required for the relief of the dyspnœa. No internal medicines are now given at the Children's Hospital until the throat is free from membrane. After that process is accomplished a mixture of quinine and iron is prescribed. The author is of the opinion that tincture of perchloride of iron combined with potassium chlorate has a beneficial effect on the course of the disease. Where there is evidence of cardiac dilatation or a tendency to syncope, digitalis or strophanthus should be administered, combined with hypodermic injections of strychnine. As regards prophylaxis, a small dose of antitoxin may be given to those persons who are or have been exposed to the contagion of this disease. The trifling inconveniences occasioned by its use soon disappear; they cannot be compared with the probabilities of an escape.

Melancholia and the Toxaemic Theory.

Clouston (Scottish Medical and Surgical Journal) remarks that when the pre-existing condition of the emotional apparatus in a melancholic patient or in his history is looked into, a state of "oversensitiveness" is usually found. The emotional reflex is exaggerated. The meaning of this is that the neurons in certain tracts of the mental area were unstable in their molecular and chemical constitution, and therefore passed into the katabolic condition too easily, and remained too long in that state. Given a brain strongly accentuated in those directions, and let its owner be the subject of any form of toxæmia or anæmia, or exhaustion of its energies, and all its weak points will be accentuated. There will be a necessary tendency for its katabolism to result in painful subjective feelings of a kind verging on the morbid; these will be the foundation of technical melancholia. It must be remembered, however, that in melancholia, which in its mildest forms is an affective disturbance, and the mental disease nearest sanity, there are nearly always some intellectual, volitional, circulatory, or nutritional disturbances. He quotes the latest pronouncements in this country on this aspect of mental disease by

Ford Robertson, Mott, and Bruce and Alexander, the latter of whom consider melancholia to be a disease of disordered metabolism, and that treatment should be directed towards increasing the excretion of waste products of this metabolism through the channels of the urinary and integumentary systems. Mott especially dwells on the auto-poisoning by choline and other products of nerve degeneration. These are the modern pathologist's latest views of the aetiology of insanity. He does not agree with them, as they do not take into account sufficiently the mental, ethical, and hereditary facts, and consequently it is a premature and incorrect scientific generalization. Unquestionably toxæmia is in many cases the chief *exciting* cause of many cases of insanity, but it is the primary condition in very few. The primary condition is a hereditary brain weakness and instability, without which toxæmia will not cause melancholia. It is of the highest importance that we should be able to distinguish between cases in which the disease has originated in the cerebral cortex and those in which it has been caused secondarily by something *ab extra*. In the former cases feeding may be the essential, and strychnine, iron and quinine, alcohol, and paraldehyde may be curative; while in the latter starving and purging may be the right therapeutics, and calomel, salol, the antitoxin serums, diuretics, diaphoretics, and thyroid extract may be indicated. There can be little doubt, however, that toxæmic conditions do play the chief part, though not the *primary* part, in general paralysis, puerperal insanity, alcoholic and syphilitic insanities, rheumatic and gouty insanities, and possibly phthisical insanity. The symptoms which should always suggest toxæmia are pyrexia, convulsions, headaches, vivid hallucinations, perversions of sensibility, stuporous and confusional states, abscesses, skin irritations, inhibition or marked interference in the cardiac and vascular actions, very foul tongue, fætid stools, and absence of chlorides in the urine.

He relates some cases in which no toxæmia was present, and the disturbances could be explained by the unfavorable influence excited by the brain cortex on the vasomotor, digestive, metabolic, and nutritive processes. He relates other cases in which toxæmia undoubtedly existed, septic poisoning being proved to be present; but there were two causes in operation—strong heredity and direct toxæmia. The mental symptoms would not have occurred but through the combined operation of both causes. Such a simple and satisfactory cause of insanity as toxæmia one would

like to believe, but mental disease is too complex a result of brain evolution on wrong lines or of reversion to be explained by any single ætiological factor.

The Cause of Sarcoma and Carcinoma.

Foulerton (The Practitioner) says: "1. That an hypothetical parasite does not in any important way elucidate the pathology of carcinoma; 2, that, so far as theoretical considerations go, the balance of probabilities is against the theory that carcinoma is caused by a parasite from without; 3, that there is no evidence that any of the parasites which have been described as the cause of carcinoma have any causal relationship to the disease; and 4, that whilst we are ignorant as to the immediate causation of cancer, the practically undisputed fact that the epithelial cells, whose vicious proliferation produces the obvious phenomena of carcinoma, are capable of migration from their normal environment, and of self-reproduction when in abnormal surroundings, renders any parasitic theory unnecessary." As regards sarcoma the case is somewhat different. In that class in which the secondary foci of new growth are mainly composed of cells histologically identical with the cells of the primary tumor, one would feel inclined to assert with some confidence that the pathological process is probably similar to that which results in carcinoma, and that the disease is not a parasitic one. Where, however, we can not be certain as to the precise source of the cells composing the secondary foci of new growth, the case is different. One can not here exclude the possibility of a parasitic cause. It seems highly probable that some of the cases of new growth which on clinical grounds are diagnosed as sarcoma are in reality cases of infective parasitic disease. The theory that carcinoma is due to some abnormality of distribution of vital function is noticed. The author says we are absolutely justified in assuming that the essential cell of the carcinomatous tumor is a normal cell except so far as it may be subject to casual modifications due to its altered environment. The carcinoma cell follows closely, so far as its altered condition will allow, the habits of growth which are characteristic of the normal epithelial cells from which it has its origin. The question under what condition the epithelial cell can penetrate its basement membrane and gain access to the lymph channels of the subepithelial connective tissue is not so easy to decide. From the clinical side one might suggest that such penetration might occur under two conditions: as the result of traumatic injury, and as the result of alteration of the

basement membrane consequent on chronic inflammation. The question why the epithelial cell, having left its normal environment, is unable to maintain an independent existence in the foreign tissues of the child as it can in those of the adult is also briefly discussed. The writer states that we can divide the post-natal term of life into three periods: 1. The period of activity on the part of the mesoblastic tissue resulting in the growth of the framework of the body; then the period in which activity of the epithelial cells, and mainly of those of the epiblastic layer, is the main factor, and finally, there is the stage of degeneration. The explanation of the marked excess of activity in certain of the epithelial cells which occur after the coming on of puberty, as shown in the growth of hair, epithelium of the sexual glands, etc., is possible either by supposing fresh stimuli specific for the growth of epithelial cells coming into existence, or that old influences inhibitory of the activity of epithelium are ceasing to operate. Dr. Foulerton reports here experiments on immunity produced by the thymus glands, which have thus far not been specially successful, but which may indicate future lines of research.

Flatfoot or Acquired Valvus.

J. K. Young (Medicine, September, 1902) says: The treatment of flatfoot should be modified to meet the three different stages: (1) mild, (2) medium, (3) severe.

1. In the mild form the restoration of the arch may be accomplished by the use of a pad of gauze held in place by adhesive plaster and by a bandage. For permanent use this pad should be substituted by a plate, which may be made of different material—steel phosphor-bronze, aluminum, German silver, and many other materials have been used. A steel spring coated with hard rubber has been used by the writer for a number of years, and of late has been replaced by rubber and celluloid plates. In adults it will be necessary to use a metal plate of some kind protected from perspiration by impervious materials. The shoe may be specially made, and a hard leather sole may be built into the shoe.

The plates, of whatever form, will hold the foot in position while the arch is being restored by exercises and massage. The principle employed in the application of plates in the treatment of flatfoot is founded upon the support of the astragalus. The relaxity of the ligaments, particularly the calcaneo-scapoid or spring ligament, permits the astragalus to fall downward, forward and inward, and the plates should be so constructed as to overcome this tendency, and this is why the writer always

employs a flange on the inner side of the flatfoot springs.

Exercises and massage form a most important part of the treatment. Special exercises are given consisting of special movements to develop the weaker muscles. These should be superintended by the surgeon in charge, and should be modified in such a way as to correct the deformity fully. Massage should always form a part of the treatment, and this would be best given immediately after the completion of the exercises.

2. In the medium degree of flatfoot all the measures before described will have to be employed, and in addition forcible correction under ether has been found to be the most satisfactory method of treatment. At this time if tenotomy of the tendo achillis is found to be necessary it should be performed. After the forcible correction a suitable pad should be held in position in the sole of the foot by means of a plaster cast. This should be worn for two or three weeks, after which the treatment before described should be continued, together with the use of an ankle brace.

3. In the severe form operative measures should be employed to restore the foot to a normal condition. These include operative procedures on the muscles and skin intended to shorten the arch of the foot by cicatricial contraction, and shortening or elongation of the tendons, as is necessary. The removal of the astragalus has been performed in most severe cases, but only in the most exceptional cases would this become necessary.

White of Egg Lemonade.

Dr. R. W. Leftwich, in The Edinburgh Medical Journal for May, speaks very highly of the following preparation as a nutritive drink for febrile and wasting disorders:

Take—

Two lemons,
The white of two eggs,
One pint of boiling water,
Loaf sugar to taste.

The lemons must be peeled twice, the yellow rind alone being utilized, while the white layer is rejected. Place the sliced lemon and the yellow peel in a quart jug with, say, two lumps of sugar; pour upon them the boiling water and stir occasionally. When cooled to about the ordinary temperature of tea, strain off the lemons. Now insert an egg whisk, and, when the lemonade is in full agitation, add slowly the white of egg. Continue the whisking for two or three minutes more. While still hot, strain through muslin. Serve when cold.

The white of egg will be found to impart a blandness which makes the addition of sugar almost unnecessary, and this absence of sweetness is greatly appreciated in pyrexial cases, and has its obvious value for diabetics. For non-febrile patients with clean tongues, more than the two eggs may be used to the pint, if desired, but the above is the best proportion in general. To the objection that the drink is contra-indicated where albuminuria is present, the author says this may be true of Bright's disease; but he has not found that diphtheria or pneumonia cases exhibit either more or less tendency to this complication than others, and no one hesitates to order brandy-and-egg mixture in these diseases.

This drink is very useful in the febrile diseases of children. It may be given simply as a "lemonade" without mentioning the eggs, and will thus be readily taken by children and difficult patients. It also possesses antiscorbutic properties, which replace those lost from milk by boiling and sterilization. In typhoid it is specially valuable, forming a relief from the monotony of milk, and not having the constipating and flatus-producing effects that beaten-up eggs that include the yolk, have. The author is confident that the patient who takes plenty of this lemonade, in addition to four pints of milk *per diem*, will emerge from the pyrexial period of typhoid fever without that wasted, hollow-eyed, and skin-drawn look, and that, after a few days, instead of lying like a helpless log he will be able to shift himself pretty freely.

Diagnosis of Appendicitis.

Cumston (Amer. Journ. of Med. Sciences, August, 1902), records several cases showing the great difficulties in diagnosis. He classes abdominal abnormalities under three heads: (1) Those due to adhesions occurring during fetal life and giving rise to intraperitoneal or extraperitoneal appendicitis, subhepatic peritonitis, or to perinephritic or perihepatic abscesses, and those cases of appendicitis in hernial sacs in the male, or in the female pelvis. (2) Those due to malformations, or displacements of the caecum and the appendix. (3) Those due to an altered relationship between the appendix and the caecum, when the former, either from excessive length or mobility, may give rise to an encysted or generalized peritonitis, or by becoming folded under the caecum outside the peritoneum may cause pus to travel towards the kidneys or into the pelvis. No single symptom can be considered pathognomonic, the diagnosis having to depend upon a consideration of all the symptoms together with the history, and a warning is given against plac-

ing too much reliance upon pain, rigidity, and hyperaesthesia about McBurney's point since in a great number of cases the pain is exclusively localized around the umbilicus. Notes of several cases are recorded in which appendicitis has given rise to symptoms simulating inflammatory conditions of the right ovary and tube, the true condition in many cases only being discovered upon operation, when an inflamed appendix was found in some instances adherent to the ovary and tube, in others only involving the small intestine. In one case, diagnosed as pelvic abscess after miscarriage, an inflamed caecum was found with a gangrenous appendix reaching down into the pelvis; while in the case of a boy, aged 7, presenting all the symptoms of appendicitis, an undescended testicle, almost gangrenous from twisting of the cord, was discovered at the operation; and in another case of a boy, aged 6, the tip of the appendix was gangrenous, being strangulated by a band of adhesions binding it down to the ileum which, with the caecum, was inflamed, and, together with the peritoneum, studded with miliary tubercles. Annular carcinoma of the caecum in another instance gave rise to symptoms of appendicitis, the organ on removal being apparently normal. Difficulties in differential diagnosis may also arise between cases of appendicitis and the early stages of enteric; psoas abscess, or where an appendicular abscess has formed over the psoas muscle or burrowed into it; movable kidney; intestinal obstruction and strangulation; lead colic; hysteria, etc.; while the very variable reaction of the peritoneum in different subjects has been taken into consideration. Cases of left-sided appendicitis arising from development abnormalities in the position of the caecum and appendix, or from pronounced kyphosis, may occur, and even when the appendix arises on the right side it not infrequently happens that, owing to its increased length, it may cross to the left side and there form adhesions, when an inflammatory process located in its apex would give rise to symptoms in the left iliac fossa.

Germes Spread by Insects.

Joseph McFarlan, in Medicine, writes as follows:

1. Insects may carry from place to place disease-producing micro-organisms which have collected upon their bodies and limbs, and occasion infection directly by alighting upon wounds, and indirectly by alighting upon foodstuffs. It is very likely the common housefly that is most culpable in this direction.

2. Insects may carry within their bodies germs of disease which have entered with the food, and which may subsequently be deposited elsewhere with the feces. This has been demonstrated in connection with tuberculosis, where tubercle bacilli, live and virulent, have been detected in the feces of flies that have been fed upon tuberculous sputum. Such infected fecal matter; being deposited where it directly or indirectly infects the individual, becomes a matter of evident importance.

3. Suctorial insects, by taking blood containing parasites from the bodies of diseased animals, may carry these upon their proboscides into the next animal bitten, directly and immediately infecting it.

Many cases of anthrax have apparently been brought about by suctorial flies. It has also been repeatedly stated that plague may be propagated by such direct infection from the bites of fleas. In certain parasitic diseases it has been clearly demonstrated that the bites of insects are accompanied by direct infection.

4. Insects may take infectious germs into their bodies and transmit them to their offspring, whose bites are infectious. The disease in which this is best seen is the Texas cattle fever.

5. Insects may take into their bodies parasitic organism which there undergo a further development, the insect acting either as an intermediate or definite host, and transmitting the parasites to other animals in some changed form in which they are infective. As illustrating this form of parasitic disease, the malarial infections of mammals and birds stand pre-eminent.

A second important affection in which the mosquito appears to play the part of a definite host is yellow fever.

A third disease, in the transmission of which insects are concerned, is filariasis.

6. The insects may become infected with pathogenic organisms, die, fall into food-stuffs, and thus impart infection to man.

The probability of this being an important source of infection is not great, as such accidents are rare. When one remembers, however, that Yersin and Nuttall have found that flies become infected with plague and die of the disease, the danger that might lurk in such an insect cadaver need not be magnified.

Foreign Bodies In the Eye.

M. Sweet, in the Journal of the American Medical Association concludes an article as follows:

1. The size of the splinter of iron or steel, and its approximate position in the eyeball, should be known before an attempt is made

to extract it by either the medium-sized or the giant magnet.

2. The x-rays are the most certain methods of diagnosis in injuries from all kinds of foreign bodies.

3. The large and medium sized magnets are of value in determining the presence of iron or steel, but negative findings can not be accepted as conclusive evidence of the absence of the metal in the eyeball.

4. The Haab magnet is superior to all forms of smaller magnets in extracting iron or steel from the vitreous chamber by way of the anterior chamber, but the great power of the instrument requires that it shall be used with caution.

5. When the body is to be extracted through an opening in the sclera close to the previously determined position of the metal the medium-sized magnets are shown by experiments to be as effective as the giant magnet.

6. The entrance of the magnet points into the vitreous is harmful, and should never be attempted except when other means of extraction have failed.

Injuries of Nerves.

Anthony A. Bowlby (London Lancet, July 26, 1902) discusses primary nerve suture. Primary suture should always be employed when it is possible to do so. The chief cause of failure in primary suture is sepsis. A secondary suture is demanded in all cases in which a wound has been inflicted and a nerve divided. In performing secondary suture it is well to remember that the nerve can be most easily found above and below the scar, therefore a fresh incision should be made. After free exposure of the nerve it should be separated from the scar tissue, its ends freshened and brought together by suture. In cases in which the nerve has been divided for a great length of time, the lower end is often shrunken and much smaller than normal. Nerves will stand considerable tension; this, however, can often be relieved by flexing the part. The sooner the nerve suture is done, the greater is the chance of benefit. The restoration of sensation and motion after nerve suture is most irregular in its appearance; sensation, however, usually appears first. The function of some nerves seems to be more easily restored than that of others; for instance, better results are obtained from suture of the perineal and musculospiral nerves than is obtained after suture of the median and ulnar. It is seldom or never possible to restore the function of the part absolutely. When nerves are partially divided, operation is indicated according to the amount of division and this can be estimated by the mus-

cles involved. Cases of partial division tend to a spontaneous union. He refers to a number of interesting cases of contusions of nerves in which absolute palsy resulted and remained for varying periods. In such cases it is considered wise not to attempt any operation but to employ massage, galvanism and use of the part. There has been no case of nerve suture reported in which motor power has been restored after an interval of four years.

Self-Abuse In Infancy.

Jno. T. Winter (Amer. Jour. of Obstet. and Diseases of Women and Children, June 1902), says precocious sexuality with masturbation must necessarily interfere with mental growth, and in such subjects we can look for loss of memory, delusional insanity, and hysterical instability. Often the habit is taught the child by the nurse in order that it may exhaust itself and go to sleep quickly. Many times the cause of the habit may be found in the condition of the parts themselves; sebaceous matter on the inside of the prepuce or hardened vernix in the vagina, inflammation of the kidneys, phimosis, seat-worms, and various other conditions causing local irritation and thus leading to manipulation of the parts. It is also thought that the practice may result from some form of brain disease or cerebral deficiency, as it is often found to exist in those suffering from some forms of insanity, and in idiocy. How shall the habit of self-pollution be corrected and prevented? Corporal punishment has no influence upon these children. Where there is no local cause, we can muffle the child's hands, or put them to bed in the spread eagle style. Not only the child, but its nurse also, should be watched. Circumcision should be done if there is an adherent prepuce. It has been suggested that the prepuce at the root of the glands may be pierced with an ordinary silver needle, the ends of which should be tied together, and thus make erection impossible.

Treatment of Thrombosis of the Lateral Sinus, Following Middle Ear Suppuration.

Dench (Amer. Journ. of Med. Sciences) recommends prompt and radical operative interferences as affording greatest promise of success, especially in those cases where the previous history is obscure, or where, owing to urgency of symptoms, there is no opportunity for further observation. He removes all carious bone, if necessary exposing the dura in every direction, and unless the lateral sinus appears perfectly healthy he makes a free incision into its wall, previously having carefully removed all purulent foci, packing off the antrum

with iodoform gauze, and thoroughly cleansing the whole area. The vessel is then cleared of all clots, and freely curetted until free hæmorrhage is established from the upper end of the sinus, but should the lumen be found to contain a firmly organized clot, no removal is attempted, as such a condition cannot give rise to any further infection. Hæmorrhage is controlled by packing the sinus with the iodoform gauze, and unless the temperature points to continued general infection nothing further is done. Should, however, any pyæmic symptoms arise, absorption is prevented by excision of the internal jugular vein, which, having been exposed in its entire length, is surrounded by two ligatures at its distal end and divided, all large branches being dealt with in a similar manner. The vein is then dissected out up to the base of the skull, where it is again divided between two ligatures, the remaining portion occupying the jugular fossa being easily cleansed through the sinus wound. Occasionally the tissues are found so matted together as to prevent thorough dissection, in which case good results have been obtained by dividing the vessel between two ligatures close to the base of the skull, thus cutting off the infective focus from the general circulation. Two cases are given in detail; the first, in which the temperature remained high after a primary sinus operation, obviously proving the necessity for prompt measures to cut off the circulation through the affected side; while in the second, which had an uncertain history, fever being kept up by a purulent focus retained in the jugular bulb after the primary operation, the wisdom of cutting off all chance of general infection is seen. In all doubtful cases removal of the internal jugular vein is advised, a simple clearing of the clot out of the sinus being relied upon only in those cases where opportunities for previous observation show no marked signs of general infection, or where curetting of the sinus suffices; removal of the vein never being delayed where evidences of systematic infection persist after the primary operation.

The Diagnosis and Treatment of Malignant Stricture of the Esophagus.

Charters J. Symonds (The London Lancet, Aug. 9, 1902) presents an interesting discussion of the diagnosis and treatment of malignant stricture of the esophagus. The diagnosis of this condition is summarized as follows: (1) Among the early symptoms we may have dyspepsia, nausea and repulsion for food; pain alone when the central district is affected. (2) The passage of a bougie is the only way to clear up the case and its employment need not be feared. (3) Extra-esophageal dis-

ease rarely gives rise to serious dysphagia. (4) Spasmodic obstruction, apart from the hysterical form, has always an organic cause and this would be better called intermittent dysphagia. (5) With regard to the 3 especial districts it may be said (a) that all organic obstruction in the upper third is malignant and has a special tendency to citratize; (b) that in the central half of the gullet a sarcoma or a myoma, both rare diseases, may cause fatal obstruction, and (c) that in the lower end alone does simple stenosis occur, and here there may be difficulty in distinguishing it from cancer of the stomach causing great reduction of the cavity (leather-bottle stomach). (6) In estimating the extent of the disease, the special value of the steel bulb is noted and also the use of the Condé bougie in obstruction at the lower end. The following is a summary of the treatment: (1) in cricoid obstruction the long rubber-tube gives excellent results. When not well borne, gastrostomy, if selected, should be performed early. (2) In disease of the central portion the short tube is serviceable in a fair number of cases and when it acts well is superior to any other method. It must be replaced by the long feeding-tube when pulmonary symptoms arise. (3) In disease of the cardiac orifice tubage is so uncertain that gastrostomy should be performed when dysphagia becomes serious.

Experiments on the Effects of Injection of Egg-Albumen and Some Other Proteids.

Sollmann and Brown (Journal of Experimental Medicine) from a study of the results of the injection of egg-albumen and other proteids, conclude: (1) The excretion of the injection of the egg-albumen, as such, is in no case complete. The quantity retained varies from 23% to 100%. (2) The retained amount varies directly with the slowness of absorption, directly with the time that the proteid remains in the body, inversely to the quantity injected, and with individual peculiarity. (3) The excreted proteid coagulates at the same temperatures as the injected proteid. (4) The injection of egg-albumen does not cause the appearance of globulins in the urine. (5) The proportion of albumen coagulating at low temperature is less in the urine than in the injected solution. . . . (7) The albuminuria lasts from $1\frac{1}{2}$ to 3 days in typical cases, according to the manner of administration. (8) Alkali-albumin as well as muscle proteids are completely retained. (9) A small amount of proteid is excreted unchanged by the feces. (10) A variable proportion is excreted as non-coagulable proteid. (11) The remainder undergoes complete metabolism to urea.

(12) The total nitrogen excretion is increased beyond the amount of nitrogen introduced as albumen. (13) Starvation appears to cause an increase in the ratio of the urea to the total nitrogen of the urine. (14) The effects of intravenous injection of egg-albumen on circulation and respiration do not differ from those of an equivalent injection of the solvent. Albumen causes, however, a specific diuresis, beginning 50 minutes after the intravenous injection and reaching its maximum in about 2 hours. It causes neither glycosuria nor hemoglobinuria. (15) The injection of egg-albumen, alkaline egg-syntonin or muscle extracts causes a rise of temperature of from 1 deg. to 2 deg. C. in rabbits. This begins in about an hour, usually reaches its maximum in from 6 to 8 hours, and then falls rapidly. The fever does not cause histological alterations in any organ examined. The injection of normal salt solution may cause a rise, but this is much smaller. (16) The injection of egg-albumen causes but very slight histological changes. A slight degree of nephritis may occur, but this is not of such degree as to affect permanent lesions. The injection of muscle extracts may give rise to a more pronounced parenchymatous nephritis. (17) Urethane is fatal to rabbits in doses of from 0.65 to 1.0 gm. per kilo., producing extensive granular and vacuolar degenerations of the hepatic epithelium. Chloretone does not cause the degeneration but is followed by congestion of the abdominal viscera. (18) Native egg-albumen injected into the femoral vein of the dog was followed, in one case, by a fatal ending with convulsions and coma. Further experiments demonstrated that there is no toxicity inherent in fresh egg-albumen nor can it be developed by brooding the eggs in the shell. The cause of the above fatal issue must, therefore, be sought in some extraneous agent that contaminated the solution. Muscle extracts were also devoid of toxicity. Alkali-albumin produces no changes beyond that may be attributed to the free alkali contained therein.

The Submucous Areolar Tissue of the Larynx and Its Significance in the Spread of Edema.

A. Logan Turner in the Edinburgh Medical Journal says that the sudden onset of acute edema of the larynx, producing symptoms of a grave nature, is an occurrence of vital importance, and the possibility of its sudden fatal termination should always be kept in mind. Cases have been reported in which death has taken place from asphyxia within a few minutes from the first onset of symptoms of dyspnea. The edema consists in a fluid exudation into the loose

submucous areolar tissue, and may be inflammatory or noninflammatory. The inflammatory variety may be secondary to previously existing disease of the larynx or it may arise in connection with inflammations at the base of the tongue, in the fauces and in the pharynx, while more rarely it may result from an inflammatory process arising in the cellular tissue or glands of the neck. The noninflammatory form may occur as a local manifestation in renal and cardiac disease, or it may result from obstruction of the veins of the neck. Turner reports 3 cases of this condition. As a result of some experimental injections into larynges which had been removed from the cadaver, he concludes that subglottic edema may be entirely confined to the area below the cords and that extension of the edema into the submucous tissue of the trachea is not common. Edema originating in the regions of the tonsils will pass downward to the glosso-epiglottic fossæ and thence will find its way into the aryteno-epiglottic folds. Similarly, edema of the lateral wall of the pharynx will spread to the pyriform sinus and thence reach the aryteno-epiglottic fold. In this way dyspnea may supervene as a grave complication of faucial or pharyngeal inflammation. There is a barrier of dense tissue beneath the mucous membrane of the posterior pillar of the fauces which interferes with the spread of fluid from the tonsillar region to the lateral pharyngeal wall posterior to it. Fluid will not pass from the lingual surface of the epiglottis to its laryngeal surface.

The Surgery of Spina Bifida.

Knott (*Annals of Surgery*) records four cases of spina bifida successfully treated by excision. The oldest patients were aged six months and the youngest four weeks. By excision the author means removal of the excessive skin and meningeal membranes, the separation of the nerves, if present, from the wall of the sac, and their restoration to the spinal canal. No attempt was made in any of these cases to close the opening in the spinal column with bone, but the muscles lying on either side were loosened so that they could be drawn in to the median line and sutured over the gap with chromicized catgut. The author sums up the results of his experience and study of the surgical treatment of spina bifida in the following conclusions: (1) Owing to the distressing nature of the affliction, the high mortality should not prevent attempts at surgical relief; (2) meningoceles, meningo-myelocoles, and syringomyelocoles may be considerably benefited by operation; (3) the improvement in function cannot with certainty be

estimated before operation, and pronounced evidences of nervous disturbance are not a contraindication to excision; (4) asepsis is absolutely essential, and though difficult to secure, may be maintained by exercising extreme care; (5) the plan of having the suture lines of the meninges and the overlying tissues on different planes will in the majority of instances prevent leakage of cerebro-spinal fluid; (6) the suggestion of Pearson to prevent the escape of cerebro-spinal fluid during a prolonged operation by stuffing the canal with gauze, is valuable; (7) large bony defects may be more effectually and readily closed by muscle than by bone; (8) it is not necessary to keep the child off its back during the healing of the wound, as has been frequently advised; (9) children with hydrocephalus accompanying spina bifida should not be subjected to operation.

The Treatment of Interstitial Nephritis.

Moriarta, in the *Albany Medical Annals*, says that a few drugs, such as the iodide of potassium, mercury, either as the bichloride or calomel in small continuous doses, and tincture of muriate of iron, associated with the proper prophylactic measures, are useful in conditions of chronic nephritis before organic changes become marked. It is well to have the possible etiology of the disease in mind when determining the drugs to be used at this time, to-wit: if syphilitic, the iodides of mercury are useful; while if it is of a gouty origin, the alkalies, colchicum, iodide of iron, and our local alkaline mineral waters are of much use. If due to metallic poisoning, the iodides come in again; while if associated with arteriosclerosis, nitro-glycerine, chloral, or bromides are of value (and in this particular condition opium in some form has been suggested). The anemia has been found to be many times improved by the use of our local iron waters.

When an exacerbation occurs with mild uremic symptoms, the patient should go to bed at once, and the bowels should be relieved by some saline cathartic, preceded or not by calomel, as may be determined. While the room is to be well ventilated, the slightest chilling of the surface of the body is to be avoided. A milk diet should at once be instituted, and quantities of water given at regular intervals, either hot or cold, though hot is better, and ice water never should be given. If the secretion of urine is scanty, cream of tartar water is of great service (one drachm to one pint), with lemon juice, as are also vapor baths. The condition of the heart and vessels should at once be determined to decide what, if any, drugs are indicated; at this time we

must always have in mind the physiological action of such drugs, as digitalis, strophanthus, strychnine, and nitro-glycerine. If the attack does not clear up, the secretion of urine becoming less, and edema present, we must act quickly, or we will have coma and death, with or without convulsions. The heart must be carefully looked after, because in cases of suppression of urine there is a secondary heart failure, often with dilatation, which calls for the cardiac stimulants mentioned—*i. e.*, digitalis, strophanthus, strychnine, and caffeine. Drastic purgatives, such as ten grains of calomel followed by thirty grains of compound jalap powder, are of use. The patient is to be placed in a wet blanket surrounded with hot water bottles; or with a little ingenuity, heat can be conducted under the bedclothes from a lamp. In the winter season if steam is available it may be utilized in the same manner. This will usually start a sharp diaphoresis. Many practitioners at this stage employ pilocarpine hypodermically, but personally it is the one drug of which the author is afraid, and seldom uses.

This treatment and diaphoresis must be continued for several hours, until the kidneys commence to act, if the patient is to be saved. When this process is finished, the patient should be carefully placed in fresh, warm blankets, and rubbed dry with considerable friction to tone up the cutaneous circulation. If this is not done the patient will be left in a weak, sensitive condition, liable to take cold upon the slightest exposure. If convulsions occur, chloroform should be inhaled, morphine given hypodermically, and chloral by the rectum; if the right side of the heart is engorged, a few ounces of blood from the arm may help.

The Modern Treatment of Pulmonary Consumption.

H. Latham, in the *Lancet*, August 16th, 1902, says that the modern treatment of pulmonary consumption is the open-air or sanatorium treatment. Its one principle is to try and increase the resistance of the body, so as to render the tubercle bacilli innocuous.

A continuous supply of fresh air, with no unnatural changes of temperature, and the avoidance of all sources of irritation from dust and the like, are the first essentials. All the usual regulations for the avoidance of bacillary infection, such as disinfection and the use of sputum cups, must be carried out. The patient must practically live in the fresh air, and so avoid sudden changes of temperature. In this way the body is hardened and colds

avoided; there are no exacerbations of the disease, and consequently the damaged tissue has time to heal. The patient, when in his room, should be alone, and the windows should be widely open.

The food should be good, nourishing, and in sufficient quantity to establish and maintain the normal body-weight of the patient. Over-feeding is often injurious; the amount to be given should be little more than that taken by a healthy person, but this amount should be taken whatever the condition, however debilitated the patient may be, however high the temperature, and even if a couple of hours have to be spent over a meal. The readiest way of reducing the fever of advanced phthisis is to increase the amount of solid nourishment. Alcohol is often of great service in enabling a person to take food. Three meals a day are taken at intervals of five hours; the food should be the best of its kind, and it should consist largely of fatty forms. It is essential that it be well cooked and attractively served,* the fat-containing sauces being an important adjunct. No food or drink is to be allowed between meals, with the exception at first of milk, which should be taken until the normal body-weight is reached. The patient must lead an absolutely regular life, so arranged that neither the lungs nor any other portion of the body is allowed to be put to any strain. Every form of fatigue must be avoided, especially anything which may tend to raise the body-temperature. The exercise should consist of very slow walking up hill for a short distance, varying from a few yards to a mile, or in the more healthy cases to four or five miles, a prolonged rest, and then a gradual return down hill by another path. Such exercise is easily regulated and acts as a heart tonic. Fast walking or running must be forbidden, as they hasten respiration and elevate the temperature. No excitement is to be allowed, so that few patients should play the piano, or cards, or chess. Any patient confined to bed should not be allowed to see any one but the medical attendant. The necessity of avoiding excitement is a vital part of the treatment in all but the very earliest cases.

Graduated exercise without strain is prescribed when the condition of the patient permits, the personal factor of the patient having to be carefully considered in each case. In the majority of cases exercise may be permitted when the rectal temperature, taken before rising in the morning, has been below 98 deg. F. for a week. If after the week, the temperature is higher than 100 deg. F., or if it fails to sink to normal within twenty minutes, or if it fails to sink

to normal within twenty minutes, or if there is any symptom of exhaustion, the amount of exercise has been too great. One of the few conditions for which a patient is kept in bed is when the temperature is habitually above 98 deg. F. in the morning before rising. Smoking may be allowed in the open air as long as it does not produce coughing and is not indulged in to excess; it should be strictly prohibited in the patient's room.

Patients should be persuaded to avoid attempts at coughing; every cough avoided is something spared to the lung. The patient should be seen by the medical attendant three times a day, weighed once a week, have his lungs examined once a fortnight, and his sputum examined once a month.

Any climate will do for the sanatorium treatment of consumption provided that the air is pure and bracing. Patients should remain in the sanatorium until all physical signs of active disease have gone, until no tubercle bacilli are found in the sputum, and until the inoculation test leads to no result. This happens on the average in from five to six months, but it may in some cases take two years or longer. In selected cases, patients may so train themselves in two months as to be able to carry on the treatment at home. After leaving the sanatorium the patient should continue the treatment as far as possible for two years, during that time avoiding all severe strain upon the respiratory or other organs, such as bicycling, etc., and shunning all large gatherings of people (theatres, churches, etc.) In most cases where the amount of disease in both lungs is extensive no great or permanent benefit is obtained by sanatorium treatment. No drugs should be used in the routine treatment of the disease, but complications or symptoms, such as hemoptysis, diarrhoea, and constipation, are to be treated on the usual lines. Never give drugs until all other measures have failed, and then never without considering the question whether in treating any particular symptom, the disease as a whole is aggravated thereby, by either digestive or other disturbance.

On the Acetone Series of Products in Connection with Diabetic Coma.

F. W. Pavy (Lancet, August 9th) says there are two types of diabetes, the "alimentary" and the "composite." In the alimentary type the error consists purely and simply of the malassimilation of the food carbohydrate, and, as a consequence, the elimination of dextrose in the urine. In the composite type, an additional faulty condition of urine exists. Besides the pres-

ence of dextrose, there is met with also a group of products derived from a retrograde tissue metamorphosis. The ill-effects of alimentary diabetes fall under two heads: There is, first, the effect due to the loss of food material in an unused state (unutilized energy), and in the next, there is the injury inflicted by the pernicious action of the sugar in transit through the system. Besides the productions of such troubles as boils, carbuncles, gangrene, phthisis, neuritis, nephritis, and cataract, the toxic influence of the sugar tells obnoxiously upon nutrition. Faulty metabolism is at the bottom of the whole matter. In alimentary diabetes the fault lies with the upward line of metabolism, or that which is concerned in placing food carbohydrate in a right position for passing to utilization. This is normally done by the synthesis of the carbohydrate into proteid.

In the composite form of diabetes defect of descending metabolism occurs, in addition to the defect of the other, and this is attended with the associated production of sugar and of the acetone series of products. This series consists of oxybutyric acid, diacetic or aceto-acetic acid, and acetone. These products form a chain of principles representing successive steps of degradation by oxidation.

With the exception of acetone, of which a slight amount may be present, they are foreign to normal urine. Their order of appearance in the urine is from the lowest to the highest form; if diacetic acid is present acetone is also, but not necessarily oxybutyric acid. When oxybutyric acid, however, is present, the presence of the other two may be looked for as a consecutive event. Acetone is best recognized by Legal's nitroprusside test, and diacetic acid by its reaction with ferric chloride. The presence of oxybutyric acid is determined by the use of the polarimeter and by comparison with the result of cupric oxide reduction, oxybutyric acid being lævoro-rotatory.

None of these substances, as shown by experiment, is capable *per se* of exerting any pronounced or immediate toxic effect, and to none of them can diabetic coma be considered directly attributable. There are two views of the pathogeny of diabetic coma; one refers it to amidobutyric acid, the other to an acidosis, or excessive production of acid. The author favors the acidosis theory, but differs with other authorities as to the way acidosis produces coma. They consider that when the acids developed (oxybutyric and diacetic) begin to fail to meet with bases to neutralize them, a condition is reached productive of coma. The effect of the administration of

carbonated alkali agrees with that observed in experimentally induced acidosis, and soda, has been frequently employed as a mode of treatment. In some cases temporary restoration from coma has resulted, but the final outcome has nearly always been disappointing. Now the author holds that the acidosis state produces coma by interfering with an indispensable functional operation of the tissues—namely the removal of the carbonic acid from the system. With the loss of its alkalinity the blood loses the power of carrying off carbonic acid from the tissues, and choked with this product of their activity, the tissues yield to its toxic influence. The carrying power of the blood for oxygen is rendered deficient by the tenacious combination of the carbonic acid with the hæmoglobin tissues of the red corpuscles. In this way the tissues fail to get their needed supply of oxygen. The characteristic breathing in diabetic coma, to which the term of "air-hunger" has been applied, testifies to the defect existing in connection with the function of gaseous exchange. The source of the acetone series of products has not been as yet definitely determined. Formerly, they were thought to be of proteid origin, but, of late, there has been a tendency to the view that fat is the source from which they are derived.

Diabetes is not the only abnormal state with which the acetone products are associated. They have been observed in various febrile affections, especially in children. Deranged metabolism from faulty nutrient supply seems to be the great factor concerned in their production. Restriction to a proteid and fat diet leads to their appearance. In diabetes the tendency is for the condition to advance to a stage attended with the elimination of these products. The younger the patient and the more sensitive the nerve organization, the greater the proneness for the disease to run on speedily into the second, or composite stage, and when this stage is reached, for coma to intervene. When the acetone series of products is discoverable to a large extent in a case it may safely be concluded that life will not last long.

The Diagnosis of Plague.

Terni (Journal of Tropical Medicine, August 1st) summarizes his conclusions as to the diagnosis of plague in the following points: (1) The plague bacillus has well-defined specific morphological characters. (2) There is no acute adenitis produced by germs which can be mistaken for bubonic plague. (3) Acute adenitis, when the clinical characters of plague are present, requires to be investigated bacteriologi-

cally. (4) The microscopical and bacteriological diagnoses of plague are founded on positive scientific data. (5) When it has been established by bacteriological examination that plague is present in a locality, the clinical symptoms are alone sufficient to establish a diagnosis. (6) The characteristic signs and symptoms of plague are: (a) Fever, ushered in by rigors with lancinating pains in a lymphatic gland or glands, and subsequent swelling of the painful gland or glands. (b) Increased frequency of the pulse independently of a rise in temperature. (c) The bubonic swelling is tense, movable under the skin, and on the deeper tissues, non-fluctuating and painful on palpation; by the third or fifth [day] the bubo attains its maximum size. (d) Symptoms of a general toxic state do not correspond with the changes and condition of the primary glandular lesion. Of all signs and symptoms to be noted in plague the nature of the pus from the bubo and the character of the pulse are of most consequence. The more sanious the pus the more virulent is the disease, and as long as there is a focus of suppuration, and consequently a liability to general blood poisoning by the plague bacillus, so long will the small and frequent pulse obtain; this marked feature in regard to the pulse continues even when the temperature is almost, or wholly, normal. In mild cases in which rapid suppuration occurs, the specific bacillus of plague disappears from the pus and even from the walls of the bubo after two or three days.

Fluorescence of Quinine and Other Remedies Used in Malaria.

King (The American Journal of the Medical Sciences, June, 1902) mentions the relation of fluorescence to the development of the malarial parasite. It is claimed that this organism does not sporulate in the dark. The light obtained in the blood must of necessity be red; hence it is thought that the curative effects of quinine may be due to its fluorescence, by which violet rays of light are found in the blood. Two other vegetable products, esculin and fraxin, possess blue fluorescence in a remarkable degree, and have long been known as remedies for intermittent fever. The former has been authoritatively stated to be quite equal to quinin in its antipyretic power. It presents a far more brilliant fluorescence than any salt of quinin. Fraxin is obtained from the ash tree of Europe, and has often proved successful in intermittent fever where quinin had failed. The curative power of iodine and its compounds, which have long been known to be so efficacious

in intermittent fever, may be due to the iodide of starch.

The most remarkable contribution on this subject is that of H. B. Jones, who, experimenting upon the rapidity with which medicinal substances pass in and out of the body, used quinin because of its fluorescence, by which exceedingly minute quantities were recognized. In the progress of this study, a substance was discovered in the tissues of guinea-pigs which possessed all the chemical properties of quinin, including fluorescence. This substance was termed "animal quinoidin." Rhoads and Pepper confirmed the experiments of Jones, and in testing the blood of malarial patients found its fluorescence was below the normal standard.

Fluorescence cannot act except where there is light, and the impotency of quinin in the treatment in the crescentic forms of the malarial parasite is thought to be due to the fact that the latter are not found in the peripheral circulation, but in the spleen, liver, bone-marrow and brain, where the darkness prevents the development of fluorescence. The same mechanism may account for the paroxysms in the tertian, or larger parasites; these distend the blood corpuscles and are consequently arrested in the peripheral circulation, and are brought in contact with light. They sporulate and cause a systemic reaction with a rise of temperature. The crescentic and smaller parasites not being arrested in the skin, and consequently escaping exposure to light, do not sporulate. Hence the estivo-autumnal, malignant quotidian, and malignant tertian are not accompanied by the malarial paroxysm, at least not with regularity, the condition being that of a progressive toxemia.

The Present Status of the Bottini Operation.

Horwitz (Pennsylvania Medical Journal, June, 1902.) says that the recorded experience of numerous surgeons whose reputations are sufficient guarantee for their statements refutes the charges that this operation is "uncertain, dangerous, and the results obtained are temporary in character." It is true that the surgeon must rely on a sense of touch for the successful performance of the operation, and in that sense it is a "blind" operation. But it is not so much so as the ordinary procedure of tearing out the prostate gland through a small incision made in the capsule, the organ being reached through an opening into the perineum, and so working by sense of touch at the bottom of a dark cavity. An advantage in the operation is that there is less objection to it on the part of the patient than to any other surgical procedure

thus far suggested in prostatic hypertrophy. The operation is quickly performed, there is slight shock, usually little loss of blood, convalescence is rapid, and the mortality is lower than in any other radical measure. Cures result in a large majority of the cases if the operation is undertaken early. The failures are comparatively few.

The operation is contraindicated when a valvular formation exists, or where there is marked overgrowth of the three lobes associated with tumor formation, giving rise to a pouch above and below the neck of the bladder. Pyelitis, when present, adds to the danger of the operation, but does not necessarily contraindicate it. The character of the growth has but little bearing on the results. In suitable cases it is not only the best radical measure thus far devised for the relief of prostatic hypertrophy, but it is attended with the smallest mortality. It is especially indicated in the early obstructive symptoms of hypertrophy.

The Aetiology of Typhoid Fever.

The aetiology of typhoid fever, says the Medical Press and Circular, Aug. 27, 1902, will for long remain one of the most interesting of problems. Since Eberth, in 1880, discovered the bacillus that is known by his name, little progress has been made on the subject. That the bacillus is the toxic agent has, we believe, been demonstrated; but it yet remains for us to learn the conditions under which the bacillus develops its toxin. Some progress has, however, been made; we have come to the knowledge that the Eberth bacillus, when passed in liquid faeces of a patient, is innocuous, and remains so for some time. It has also been ascertained that its vitality is great, and that typhoid faecal discharges are not rendered aseptic by being buried in the soil. Indeed, recent investigations go to show that such a method of disposing of typhoid dejecta is about the most dangerous that could be adopted. When the bacilli-charged stool is poured into the earth, the bacillus quickly acquires its characteristic properties and soon makes its way to the surface of the soil, where the faecal impregnated soil has furnished the *Musca domestica* a suitable resting place. At this point medicine awaits the aid of the bacteriologist to learn the life history of the Eberth bacillus. From clinical observations it seems probable that in the earlier metamorphoses of the bacillus, in what we may call for convenience sake the spore stage, the miniature bacillus may be inhaled and make its way through the pulmonary tissues. That typhoid is usually water-borne may hold good for large cities, but it altogether fails to explain the prevalence of the dis-

ease in hot, dry countries, or in camps of modern armies where the water is sterilised by boiling. The statement that in camps soldiers prefer to drink contaminated water and take the risk of typhoid rather than use the sterilised water is to charge them with an absence of common sense. We consider that in hot climates the dust storms and dust laden air not unfrequently carry bacilli spores, which will account for a certain percentage of cases, not a large percentage. In camps the common house fly is the principal agent in disseminating the poison. The latrines of the soldiers and the stools of the hospital patients are the feeding places of the flies, and the dejecta of one patient affords sufficient material to infect a thousand. The warmth of the tents and hospitals attracts the flies, and the milk, meat, and indeed all the food on the premises, become infected. This source of infection is the great danger of typhoid fever in a farm house from which milk is supplied, either direct to families or to creameries. The active part that the house fly plays in producing epidemics of typhoid it was impossible to judge of until Dr. Packard, of Boston, 1874, made known its life history. We are too much given to formulate our opinions on disease from facts ascertained in this country without taking into account the course the disease runs elsewhere. How the conditions under which typhoid occurs in Australia, and how dissimilar the symptoms. We have no explanation of the immunity of the native of India to the disease. He drinks notoriously unclean water, he suffers from such filth diseases as cholera and plague, and from a form of relapsing fever, with purging, and although the European resident gets typhoid he goes free. Neither in this country nor in France has the disease during the last two decades of the nineteenth century been so typical of the classic descriptions of Louis and Jenner than it was. It is, however, satisfactory to recognize that we can by sterilising typhoid stools immediately they are passed do much to stamp out the disease. To secure this very desirable object the antiseptic should not be a volatile one, for all antiseptics of that nature, such as carbolic acid, and admixtures of the creoline series, are practically useless; the antiseptic volatilise and the period of suspended animation of the bacillus passes off, and he acquires his virulence and activity in undiminished amount. A trustworthy antiseptic in such cases is a solution of pure sulphate of copper, which should be poured into the night chair immediately before the patient defecates. The copper salt not alone sterilises the stool, but is a poison to flies. We have also learned the necessity

of keeping all food under gauze or other covers, so that it may not become infected. But until we know the life history of the bacillus our prophylactic measures will be incomplete.

The Toxicity of Boracic Acid and Borax.

The Medical Press and Circular notes that it is too generally assumed that boracic acid and its salt, borax, are free from toxic properties, so much so that milk dealers do not hesitate to introduce comparatively large quantities into their milk as preservatives, in ignorance or indifference to the possible effects on the consumers thereof. Dr. Hervault, of Rennes, calls attention to the cutaneous symptoms which have been observed to follow the employment of boracic acid enemata. Such injections have, in a number of instances, been followed by erythematous eruptions commencing in the form of papules disseminated over a more or less extensive area. The eruption is associated with a rise of temperature, and is followed by well-marked desquamation. He notes that these symptoms subsided directly the enemata were suspended. Similar symptoms have been known to follow the use of boric acid gargles, but so far as the enemata eruptions are concerned we are not satisfied that they were really due to the boracic constituent, since erythematous eruptions have often been reported as following the injection of fluid into the large intestine. It seems highly probable that the symptoms are due to the absorption of ptomaines from the intestine, such absorption being determined by the increase of intraintestinal pressure consequent upon the injections.

Simple Media for Differentiating Typhoid from Colon Bacilli.

P. H. Hiss (Jour. of Med. Research, June, 1902), has been able to differentiate the typhoid from the colon bacilli satisfactorily by means of simple combinations. The medium which has been most thoroughly tested consists of agar, 15 grams; gelatine, 15 grams; Liebig's extract of meat, five grams; sodium chloride, five grams and dextrose, 10 grams to 1000 cubic centimeters of distilled water. No correction as to reaction is necessary. The best method of making an investigation on feces is to transfer one to several loopfuls to a tube of nutrient broth or sterile water, making a fairly cloudy emulsion. From this emulsion five or six plates are usually made by transferring one to five loopfuls of the emulsion to tubes containing the melted plate medium. When the loopful of the emulsion is thoroughly mixed with the medium, this is poured into a Petri dish,

allowed to harden and kept for 12 to 18 hours at 37 deg. C. The deep typhoid colonies are of irregular shape with well-marked threads of bacilli given off from them; their texture is generally loose and their color often light-green, becoming darker in the large ones. The surface colonies may be quite flat and homogenous, or may show a denser center with threads spreading out from it. On the other hand the typical deep colon colonies are denser, darker and larger and do not have irregular outgrowths or fringing threads. The surface colonies are quite characteristic in that they are large, disc-shaped, of a deep color nearly to the periphery, terminating in a well-marked, light thin zone. The typical thread-forming colonies of typhoid together with the diffuse clouding and non-gas formation are found seldom, if ever, as characters of organisms other than typhoid bacilli occurring in feces, so that these latter may be readily identified in 24 to 36 hours. Even the intermediate or Gartner group gave different pictures.

Prevention and Cure of Insanity by Removal of Abnormal Pelvic Conditions.

E. Hill (Amer. Jour. Surg. and Gynec.) says:

1. Less than 10 per cent. of the female insane have normal pelvic organs.
2. That, in the hands of competent operators, upward of 20 per cent. of the so-called chronic insane recover their mentality, and 15 per cent. are improved after the removal of the physical disease.
3. We find that, inasmuch as the pelvic organs are exceptionally exposed to traumatism and infection, they are frequently the seat of disease; and that mental abnormality is more frequently associated with pelvic disease than with diseases of any other locality outside the large nerve centers. If this be the fact, we should ever be on the alert in all cases where there is marked alteration in the mental health of our patients; and while giving due consideration to the whole organism, to make a thorough investigation of the conditions of the pelvic contents; and in so doing we shall frequently be rewarded in finding in the pelvic disease the local irritations resulting in abnormal psychic manifestations.

Typhoid Fever.

J. R. Stivers (Brooklyn Medical Journal) makes the following report of forty-four cases of typhoid, including patients in private practice and in hospital, treated during the past fifteen months. 87 per cent. of the cases treated were under 30 years. Thirty-two were males, twelve females. Thirty-eight of the cases recovered and six died, making a mortality rate

of 13½ per cent. But of the six cases that died, three were moribund on admission to the hospital, two dying on the third day and one on the fourth day after entering, so that, excluding those three cases the mortality is reduced to 7.3 per cent.

The death rate in those over 30 years of age was 33½ per cent., there being six cases and two deaths. Two cases had severe intestinal hemorrhages; one, a girl 16 years of age, having twenty hemorrhages in four days; and the other, a girl of 14 years, having sixteen hemorrhages in about the same length of time. The hemorrhages occurred in both cases during the third week of the disease. Both patients recovered.

Two cases presented symptoms during convalescent period that should serve as a warning to physicians that extreme caution should be exercised in regard to the exhibition of solid food. These cases, both of moderate severity, had nearly run their course and were thought to be doing well when in each case the temperature started up and remained in the neighborhood of 102 deg. F. for four or five weeks longer. The patients, we supposed, were on the usual typhoid diet, and careful examination of the lungs failed to show any involvement of these organs, so that the temperature could not be accounted for until later it transpired that one of the patients in the convalescent ward had been smuggling bread to those two patients each morning during the temporary absence of the nurse. After this discovery was made and the errors in diet were corrected, the temperature dropped and both patients recovered.

The average time in bed of all cases that recovered was seven weeks. The patients all had the bath treatment, either the tub bath or the cold spouge, with such medicinal treatment as seemed indicated in each case.

The Treatment of Typhoid Fever with Special Reference to the Use of Water.

G. W. Boot (St. Paul Medical Journal) recommends the free use of water by the mouth, by the bath, and by enema. Milk is the best diet, because in addition to furnishing all the proximate principles necessary for the nourishment of the body in assimilable form it furnishes more water than any other form of diet. But plenty of water should be given in addition. In his country practice, where tub baths are out of the question, the author has the patient placed on a rubber sheet, into which he sinks, forming a hollow. A pitcher of water at 80 deg. or 90 deg. F. is poured over him, and the water which accumulates around him is repeatedly soused over him

by means of a large sponge, and cold water is constantly added. This reduces the temperature, stimulates respiration, and by change of position prevents hypostatic congestion of the lungs and pneumonia. Purgatives and enemata lessen the amount of infection, carry away the toxins formed in the intestines and eliminated by the bile, remove the toxins eliminated by the intestines, and lessen the local infection by providing drainage for the infected Peyer's patches. They are not contraindicated, but rather indicated, in diarrhea.

The Casual Relation of Cocci to Rheumatism.

W. Blair Bell (Edinburgh Medical Journal, August) states that all acute rheumatic affections are of microbic origin, and, further, that they are of coccal causation. The source of infection is sometimes obvious, sometimes obscure. The author thinks that those specially called "rheumatic," as opposed to pyæmic suppurating lesions, are produced by a toxine circulating in the blood without an accompanying army of cocci; but that certain of the *cocci*, e. g., pneumococci and gonococci, do frequently invade the joint and produce symptoms that are no longer purely rheumatic. From this multiplicity of determining factors, the author concludes that "rheumatism" in its acute form is a symptom only of many toxæmias and not a clinical entity; chronic rheumatism being a symptom of some perverted chemical change associated with cold, food, nervous changes, etc. The so-called specific diplococcus is a modification of either the streptococcus or the staphylococcus—an attenuated variety—and it is by these that the ordinary nonsuppurating "rheumatic fever" is produced.

The Treatment of Eclampsia.

Howard Parker (Louisville Monthly Journal of Med. and Surg.) pins his faith to veratrum viride in the treatment of eclampsia. One of his cases is reported at length. The woman had had five convulsions when he first saw her. Assistance was summoned, chloroform being administered in the meantime to prevent a recurrence of the convulsions, and the woman was delivered at once. In spite of large doses of chloral and potassium bromid and hypodermics of morphine and pilocarpin the fits came on again after delivery and she had a convulsion every half hour until there were eleven. She was then given 20 drops of tincture of veratrum viride and 15 drops more in three-fourths of an hour. The convulsions ceased and there was free emesis. There was only one more convulsion and that after the use of the veratrum

was temporarily suspended. Convalescence was rapid. The urine was loaded with albumin.

Treatment of Corns.

Ritter (Wis. Med. Recorder) claims that hard corns may be softened by prolonged soaking in a warm solution of washing soda, when the corn can be removed by scraping with a sharp knife. The tender surface should be covered with a salicylic acid plaster. This same procedure should be repeated for two or three days. Another method is to soak the foot in hot water twenty minutes or half an hour before retiring and apply over the corn every evening the following:

Salicylic acid	gr. 30
Ext. cannabis indica	gr. 5
Glacial acetic acid	gr. 5
Oil turpentine	m. 15
Cocain	gr. 5
Collodion, q. s. ad.	dr. 4

Or, if preferred:

Salicylic acid	gr. 30
Ext. cannabis indica	gr. 10
Tinc. iodine	m. 10
Collodion, q. s. ad.	dr. 4

The latter should be applied morning and evening for five or six days, and then removed with the corn by soaking in hot water. Strong applications of nitrate of silver will often relieve the pain of either hard or soft corns. Temporary relief from hard corns may be secured by the use of felt rings with a central perforation to admit the callosity. Inflamed corns require moist antiseptic dressing with elevation of the foot. The soft corn should be treated by bathing the foot in hot water every night and removal of all dead epithelium with a sharp knife; the denuded surface should be protected by a pad of cotton containing some drying powder, as tannic acid or equal parts of boric acid and zinc oxid.

The Continuous Bath in Surgery.

Pressly (Maryland Med. Jour.) records a number of cases of severe wounds, including burns, septic infections and crushing and contusions of different limbs in which he obtained excellent results from the continuous or intermittent bath. Very little apparatus is necessary and can be readily improvised, the main object being to make the patient comfortable. The whole body or merely the infected part may be immersed, according to the locality and the nature of the case. The water should be clean, preferably running, warmed to about the body temperature, and should have a specific gravity approaching that of the blood serum. The temperature is maintained by adding a little warm water every

half-hour, and at the same time taking out a similar quantity. The tub should be covered with blankets, and with a little care the temperature can be kept between 98 deg. and 100 deg. F. In addition to adding water occasionally it is necessary to change the entire volume of water three or four times in the twenty-four hours. The specific gravity may be raised to approximate 1.038 by the addition of one dram of common salt to the quart of water. A little boric acid may be added for its antiseptic influence. The advantage in thus raising the specific gravity is that there is less swelling of the member due to endosmosis. There is less ulceration of the skin if the healthy areas around the wound are greased with suet or vaseline. If the patient is restless and does not sleep while in the tub, or if he shows symptoms of exhaustion, he should be removed from the tub, dried, and a dressing applied to his wound. He is then put to bed, for a night, and then in the morning, after removing the dressing, he should resume the tub, thus making the bath intermittent. The bath should be kept up thus intermittently or continuously until the wound is protected by granulation tissue. Usually fourteen days will suffice, in the worst cases, though it may require longer. While there is any sloughing the bath should be continued.

The advantages claimed for the continuous bath in these conditions are three: First, the warm water is an anodyne, and the patient suffers less pain and requires less opium than under any other treatment. Moreover, the afflicted member being floated up by the water, may be moved by the patient, and his comfort is again increased by not being forced to remain immovable for a more or less prolonged period.

Second, the odor from offensive wounds is controlled better than in any other way. Doubtless all have seen cases where the odor from infections, and particularly from burns, was almost insufferable, so that the patient would be a nuisance to the other inmates of a ward, or even of an adjoining room. This very disagreeable symptom is entirely controlled by the bath, the offensive odors being absorbed by the water.

Third, and herein lies the real value of the immersion treatment, it constitutes the most perfect drainage attainable. By a constant interchange of fluids the poisoned discharges are continually removed from absorbing forces, and the patient's prospects of recovery enhanced accordingly.

Southern Blacks and Northern Cities.

The following is taken from the editorial columns of *American Medicine*, Philadelphia: The influx of Southern negroes into

Northern cities calls for thoughtful consideration on the part of all good citizens, and particularly of those in charge of sanitation and public education. The *Philadelphia Times*, July 16, in an editorial comment on the unparalleled increase in the colored population during the last decade, 59.5%, or two and a half times that of the population at large, recognizes the added responsibility hereby placed upon the Quaker City, which now possesses a black population greater than that of any other city of the Union, except New Orleans and Washington. This rapid augmentation is not attributable to natural increase of resident negro families; but to immigration from the South, particularly from Maryland and Virginia, and in the light of the conclusions of such students of the negro problem from a medical standpoint as Dr. P. B. Barringer, Chairman of the Faculty of the University of Virginia, and Dr. Seale Harris, Health Officer of Bullock county, Georgia, there can be no excuse for indifference to the dangers incident to this rapid drift of the negro to the city. Dr. Barringer, in his address entitled "The Sacrifice of a Race," delivered at the race conference held in Montgomery, Ala., says:

"All things point to the fact that the negro, as a race, is rapidly reverting to barbarism, with the inordinate criminality and degradation of that state."

Dr. Harris presents statistics showing the enormous deathrate of 52.11 per 1,000 among the blacks, nearly double the birthrate, 26.54 per 1000. He says:

"One-third of their births are reported as being illegitimate, a fact which merely suggests the degree of immorality among them. Contrast this with the fact that among the whites less than one-half of 1% of births are recorded as occurring out of the bonds of wedlock. * * The negroes, as a class, have absolutely no conception of personal hygiene. * * I believe I do not exaggerate when I say that over 50% of the negroes in the United States above the age of 25 have been affected with syphilis. *

* I believe that 90% of the men over 25 years have had gonorrhea. * * The uterine tubal and ovarian troubles among negro women, traceable to gonorrheal infection, would be astounding to one who did not have frequent occasion to examine them for such troubles."

Harris quotes Hoffman's "Race Traits and Tendencies of the American Negro" to the effect that:

"In the city of Charleston for the year 1890, for every 1,000 white children born, there died during the year 200; of negro children, 461. In the city of Richmond, for every 1,000 white children born there

died during the year 187; and of every 1,000 negro children born 530 died. If these statistics are true, what can we expect from the coming generations, because statistics of criminality show that the amount of licentiousness and immorality among the negroes is rapidly increasing."

These facts, together with the wellknown susceptibility of the negroes to influenza, pneumonia, tuberculosis and other infectious diseases peculiarly prevalent in the crowded districts of great cities, suffice to indicate the increased danger to health and morals accompanying the rapid urbanization of Southern negroes.

Cysts of the Broad Ligament Complicated with Myxoma.

Hornibrook in the Western Medical Review describes two cases of this disease occurring in his practice within a few months. Growths of this character seldom form adhesions to the neighboring parts, probably because of the peculiar nature of their epithelium made up of cylindrical cells. His first case was that of a woman, aged 42 years. Upon operating the writer found the whole abdomen filled with myxomatous cysts, varying in size from 1 inch to 3 inches in diameter. These were only slightly adherent to the abdominal wall and viscera and were rapidly peeled off without hemorrhage and made about 3 gallons in amount. The main cyst, which was large and multilocular, was then emptied. It was attached to the broad ligament by a pedicle at least 5 inches wide and nearly an inch thick. This was ligated in eight sections and the peritoneum drawn over the stump with Lembert sutures. Three pints of salt solution were injected under the breasts before the operation, during which the patient became pulseless frequently, but rallied when salt solution of a temperature of 110 deg. to 115 deg. was poured into the abdominal cavity. Strychnia also was used hypodermically. A high enema of salt solution was given before removal from the table. She rallied rapidly and made an uninterrupted recovery in three weeks. The second case was first seen by the author on July 20, and diagnosis of ovarian cystoma made. A month later he recognized the myxomatous character of the growth but was not permitted to operate until September, by which time the patient was greatly reduced in strength and the action of the kidneys much impaired. The abdomen was filled with myxoma, and the original cyst, which grew from the broad ligament, was ruptured. Normal salt solution was freely used and she appeared to bear the operation well, but after the first eight hours began to fail, and died in 12

hours after the operation. He believes that an earlier operation might have saved her life.

Pneumococcic Arthritis.

Herrick (American Journal of the Medical Sciences) has been able to add much of value to our knowledge on this subject and report new cases. These, together with the cases previously collected by Vogelius, Leroux, Cave and others, makes a total of 52 cases so far recorded. Happily the disease is of relative infrequency, but two cases occurring among 2,292 cases of pneumonia treated in different German clinics; but two cases among 3,293 cases of pneumonia treated in the Charité in Berlin; but one case among 650 cases of pneumonia treated in Munich; but three cases among 1,215 cases of pneumonia treated in several clinics in Paris, and but six cases among 4,256 cases of pneumonia collected by Netter—thus but 14 cases among 11,706 cases of pneumonia, or one case to about every 800 cases of pneumonia. The complication is more common in men than in women (40 males to 7 females); it occurs at any age, and it develops oftenest during or shortly after croupous pneumonia—sometimes, however, as late as the third week after the crisis. The infection may be primary in the joint, and severe and even fatal constitutional symptoms may result from the toxemia thus induced. In primary pneumococcic arthritis pulmonary infection may or may not occur. Previous damage to a joint as by trauma, rheumatism, or gout favors the local infection. The lesions may be limited to the synovia, or they may be more extensive, involving the cartilages, the bones and even the periarticular structures. The lesions vary with the duration of the inflammation, the virulence of the microorganisms, and the general and local resistance of the individual. In the acute cases, often little more than a synovitis is seen. The exudate varies from a serous or serofibrinous fluid to the more commonly found thick, creamy, yellowish pus that contains the pneumococcus. In the same patient one joint may contain a purulent, and another a serous exudate. In other cases, and particularly those of a subacute or more chronic character, the changes are more extensive and destructive. The cartilage may be eroded, the bone invaded, the ligaments destroyed and the tendon sheaths and muscles in the vicinity of the joint involved. In a few cases the destruction may be extreme, amounting to complete disintegration of the joint. Usually the lesions are confined to a single joint (61.5%)—the largest joints, especially the knee, being oftenest involved. Clinically

the disorder is recognized by the ordinary signs of acute or of chronic inflammation. The development of arthritis during the course of, but especially during convalescence from pneumonia, should excite suspicion of pneumococcic infection of the joint; and color would be lent to the supposition if the patient were an alcoholic, and if the affected joint were the seat of previous trauma or injury from rheumatism or gout. It is important, however, to bear in mind that an arthritis complicating pneumonia need not be due to the pneumococcus. The diagnosis of the nature of the infection, therefore, depends upon examination—microscopic and bacteriologic—of the fluid obtained by puncture. The prognosis of pneumococcic arthritis is grave, the mortality being 65%, the consequence in large part of bacteremia and the concurrent involvement of other and more vital parts of the body—meninges, pleura, pericardium, etc. However, spontaneous recovery even in cases of purulent exudate may take place. In the event of suppuration the joint should be incised immediately and drained; should the effusion be serous in nature, healing may result from aspiration, rest and compression. In all cases the complication is of serious moment, and although it is of uncommon occurrence, it appears advisable to draw attention to it, if for no other reason than to emphasize the fact that bacteremia is a constant concomitant of pneumonia, and that pneumonia is not a disease of the lungs alone but a general infection of which the most serious manifestations frequently are not the pulmonary lesions but the intoxication and the bacteremia.

Proctitis.

Gant (*Post-graduate*), says the treatment of chronic proctitis should be palliative and surgical. The palliative treatment consists in the removal of any irritating disease or foreign body in the colon or rectum which tends to aggravate or prolong the inflammation. Antiseptic, stimulating and cleansing remedies should then be applied to reduce the inflammatory process. The diet should consist principally of eggs, milk, cream, nourishing soups, broiled steak, baked potatoes, matzoon and koumiss. Fruits and vegetables may be taken in limited quantities, except when the stools are too frequent. As intestinal antiseptics he recommends the following:

R. Pot. permanganati	gr. i	06
Sodii sulphocarboli	gr. v	30

M. Fiat capsula No. i. Sig.: One such capsule three times a day one hour after meals. The capsule should have an enteric

coating to render it insoluble in the acid secretions of the stomach; or:

R. Betanaphthol	3ii	8
Bismuthi salicylatis	3ii	8

M. et div. in chart. No. xxx. Sig.: From three to twelve powders in twenty-four hours; or:

R. Salol		
Bismuthi salicyl.	aa	3iiss 10

M. Ft. chart. No. xxx. Sig.: One powder three times a day before meals.

When laxatives are necessary the salines are of benefit. Strong purgatives are contraindicated.

To reduce the inflammation and encourage the healing of ulcers the greatest benefit is derived from semi-weekly enemata composed as follows:

R. Argenti nitratis	gr. xl	265
Aque	Oi	480

M. Sig.: To be used as a local enema twice a week. If this should cause pain the rectum should be immediately irrigated with a physiologic salt solution.

Where the ulcers are stubborn to treatment the mucosa may be mopped frequently with the following:

R. Bismuthi subnit	3ss	2
Balsami Peru	3i	30

M. Sig.: To be applied locally. A 10 per cent. solution of ichthyol may be substituted for the foregoing.

Matthews recommends the following for such purposes:

R. Bismuthi subnit	3ss	15
Iodoformi	3ss	2
Olei olivæ	3iii	90

M. Ft. emulsio. Sig.: To be used as a rectal injection.

Pemphigus.

Shoemaker (*Medical Bulletin*) believes that pemphigus may occur at any age. Agencies producing an improvised condition of the system generally precede this trouble. The writer has noticed it following alcoholism, excessive tobacco or cigarette smoking. Bright's disease, typhoid fever, etc. The curability of pemphigus, therefore, depends on the affection with which it is linked. There is consequently no specific remedy for this skin trouble, but arsenic is capable of producing marked amelioration in many cases. The preparation, however, is of benefit only in the chronic form of any skin disease which may be advantageously combined with strychnin and quinin. Lotions, ointments and dusting powders containing such agents as zinc oxid, carbonate or the oleate, alone or mixed with equal quantity of hamamelis, lead acetate, potassium chlorate, bismuth subnitrate or subcarbonate have been found most useful. Baths warm or tepid are of

decided benefit, especially when there is much irritation of the skin and when the surface is covered with crusts. He suggests the following which may be varied to suit the individual case:

R. Strychninæ sulph.
Acidi arsenosi, aa gr. 1.40 0015
Ferri pyrophosphatis gr. i 06
M. Ft. pilula No. 1. Sig: Four such daily; or:
R. Strychninæ sulph. gr. i 06
Acidi hydrochlor. dil. 3iii 12
Glycerini 3v 150
M. Sig: One teaspoonful in water after each meal.

For local application the following is of service:

R. Ung. zinci oxidi
Ung. aquæ rosæ, aa 3iv 16
Acidi carbol.
Chloralis hydratis, aa gr. x 65
M. Ft. Unguentum. Sig.: Apply locally; or:
R. Cocainæ hydrochlor gr. v 30
Acidi carbol in. xv 1
Camphoræ gr. x 65
Chloralis hydratis gr. xv 1

The last three preparations, when rubbed up together form a liquid which is then incorporated with the cocain and added to:

R. Ung. plumbi subacet,
Ung. zinci oxidi, aa 3ss 15
M. Sig.: Apply locally.

Fractures of the Shaft of the Femur.

Williams, in the Canada Lancet, Aug., 1902, makes the following statements:

"1. That more or less shortening is uniformly the result even in the most favorable cases. 2. That as overlapping of the fragments is nearly always inevitable, one inch constitutes a good result, less than one inch, excellent. (My cases show only a slight fraction over an inch.) 3. That slight limping shows shortening of about an inch due to tilting of the pelvis to the injured side, and is not to be considered unfavorable as a result of oblique fractures. 4. That slight stiffness of the joints and atrophy are inevitable in most cases and are of minor importance when bony union has occurred without deformity. 5. That a laboring man will lose 40 per cent. of his working power to the end of twelve months and 25 to 30 per cent. for the rest of his life. 6. That slight eversion and deformity, if present with good bony union, and the ability to walk, are inevitable in some cases no matter how carefully treated. 7. That age is a great factor in giving an opinion, under 18 years expecting a better result than in strong muscular adults. 8. That a final judgment should not be given for

twelve months. The surgeon himself should be prepared to state: 1, that he has used some approved method of extension and counter-extension; 2, that side splints or a cast have been used to prevent lateral movement of the fragments; 3, that some method has been adopted to correct eversion and external rotation of the limb; 4, that measurements were applied at the time of the injury and repeated at frequent intervals up to the end of the 25th day by tape or steel, and by the correct surgical methods; 5, that he was careful in recognizing and considering the constitutional condition of the patient, as bearing on the results, during the treatment; 6, and finally, he should give a guarded prognosis at the time of the injury, keeping in mind the tendency to non-union, shortening, deformity, and loss of working power, in all oblique fractures of the thigh; 7, Golding Bird says, 'In charges of malpractice, it is not the beauty of the bone scar that should determine the rights of any particular case, but the clinical result produced by the treatment. It is a sharp-edged tool that may inflict a life-long injury on the surgeon.' In other words, it is impossible to accurately approximate bony ends in the deep tissues without more or less irregularity or overlapping, and it should be impressed on the court by the medical expert, 'that x-ray pictures of fractures should carry little weight against strong, bony union without manifest external deformity.'"

Fractures and Injuries to the Elbow Joint.

Gillette and Brimhall (St. Paul Medical Journal, August, 1902) writes of their method of treating fractures and injuries of the elbow joint. As regards the question of passive motion, they do not advise it at all and their method of treatment is to apply a plaster of paris cast in extension, keeping it on for five or six weeks. This is the most comfortable for the patient, interfering least with the circulation, and conclude that it is shown in their cases and those of others that the fracture of the external or internal condyle is the most frequent fracture, and that the muscles arising from these condyles have a tendency to draw the fractured portion toward the median line and in front of the elbow joint, thus blocking flexion, and with the straight splint they are easily held in position. If there is a great deal of callus there is no danger of the olecranon fossa becoming filled with it and thus blocking extension, and the olecranon process furnishes an admirable splint to keep in place the fragments when the condyles are fractured. The traction that is made with extension and supination keeps the normal bony sur-

faces, with the exception of the epitrochlear surface and the olecranon, the furthest apart. They state that in fractures near a joint no motion whatever should be permitted until they are thoroughly united as the irritation naturally causes an increased amount of callus which interferes with motion. Active motion is much better than passive since no force is used. It is the tendency of all joints when injured or inflamed from any cause to flex, therefore, if an arm is placed in a flexed position for repair, when it is restored it is necessary for some active measures to be taken to extend it—this is not necessary when the arm is fully extended. Ankylosis is rare from any cause, less frequent from injuries. No case of ankylosis from injury fracture or dislocation in some twenty cases which were considered bad results from fractures treated in the flexed position and some which were not diagnosed or treated at all. An anesthetic should always be used in reducing these fractures as they result from such slight causes in children that they might easily be overlooked, and moreover, under anesthesia it is much easier to reduce deformities, and the anesthesia should be kept up until the plaster is thoroughly hardened. While this position gives the best results, the fracture must be perfectly reduced when the splint is applied and failure in this was the cause in one or two imperfect results out of some thirty cases which have been treated this way.

Puerperal Aphasia with an Analysis of 18 Cases.

McIntyre Sinclair, in the London Lancet, July 26, 1902, discusses this condition. He says the term has hardly found its way into English nomenclature, though it is given a distinctive significance in continental records. He follows Poupon's classification of cases, those due to nervous causes and those of vascular origin, while he admits the occurrence of cases due to nervous dyscrasias, such as hysteria and reflex disturbances, as complications of pregnancy. The author thinks Poupon lays too much stress on this factor and the occurrence of definite aphasia following delivery should usually rather suggest a local focal lesion. In the second group, those due to recognized or suspected vascular lesions, and which, therefore, comprise the greater number, Poupon credits, as the main factor, cerebral embolism. There are, however, also many cases where the blood vessels show no signs of degeneracy, there is no cardiac disease and no contraction of the neurotic habit. Sinclair accounts for these by the condition of the blood in pregnancy, which he thinks has a greater tendency to

the formation of clots within the vessels and gives his arguments in favor of this point of view. An increased tendency to aphasia in subsequent pregnancies is also an argument for thrombias against emboli. The nature of the labor has no relation to the loss of speech. In many cases it is natural and easy, but it is evident that in pyogenic cases and again in cases accompanied by severe hemorrhage and subsequent anemia it may contribute indirectly to the occurrence. Lacteal derangements may, as Poupon and Bateman think, have some share in the production. The writer has noticed the large proportion of recoveries from primary attack. The age of child-bearing women is an important factor in this, and the vascular conditions are mostly such as to allow the quick resolution of a thrombus or the rapid opening up of a collateral circulation. At the same time the statistics emphasize the liability of recurrence in subsequent pregnancy and the extreme severity of the second attack. He recommends warning the patient of its possible occurrence of aphasia or other cerebral complications that may present, as recurrence is a serious matter.

A Case of Recovery from Membranous Gastritis.

Grunbaum (Lancet, August 2nd.) states that membranous gastritis is a condition characterized by an exudation from the epithelial lining of the stomach, leading to the formation of a false membrane over the whole or a part of that viscus. The symptoms are very variable. Thirst is often distressing, the pain in the abdomen is great, and vomiting uncontrollable. But cases have been recorded in which no symptoms existed. The pathognomonic signs is the vomiting of a cast of the stomach or shreds of croupous membrane, but owing to the rarity of this sign, together with the fact that this form of gastritis is usually secondary to some very grave disease, the condition is rarely diagnosed during life. The cast consists of fibrin and blood cells only. The case here reported was that of a girl aged three years. She complained first of sharp earache, the pain running down the neck to the stomach. No fever; no membrane on tonsils or fauces. On the tenth day the child vomited a piece of membrane the shape and size of which suggested that it was a cast of the greater part of the stomach including the cardiac opening. The cast of the pyloric end was missing, but later, it too was vomited up. Cultures from the throat and the membrane, and also direct smears all failed to show any diphtheria bacilli. The patient complained chiefly of

great thirst, but as vomiting followed even small doses of water, rectal feeding was adopted. Although diphtheria was suspected no antitoxine was given. The patient's condition gradually improved, the vomiting grew less, and within ten days she was entirely out of danger.

The Functions of the Epiglottis.

K. Renshaw (British Medical Journal, July 19th), commenting upon the old idea of the function of the epiglottis was that it was to close down upon the glottis during deglutition, and so prevent food from entering the larynx. Against this theory may be stated the following: (1) The muscles attached to the epiglottis are far too weak to be capable of bending the cartilage transversely; (2) persons in whom the epiglottis has been removed or destroyed have no difficulty in swallowing solids; (3) the normal irregularities of the epiglottis would prevent its being bent backward; and (4) a case of acid poisoning has been described where the only erosion of the glottis was at a position which would have been completely protected by a depressed epiglottis. As a matter of fact, the only function performed by the epiglottis during deglutition is to act as a slight lateral protection to the glottis. Its main function is to prevent the secretions of the upper air passages, etc., from entering the larynx when in a state of rest. By its means these secretions are deflected into the pyriform fossæ, and so find their way into the œsophagus.

Cyst Formation in the Pineal Gland.

J. O. W. Barratt (Journal of Pathology and Bacteriology, June, 1902) draws the following conclusions:

1. Cysts were found in forty-seven per cent. (eight out of seventeen) of the human pineal examined, and were usually multiple. No definite relationship can be asserted, in the cases examined, between cystic change and age, sex, mental or accompanying visceral disease. In all except three cases brain atrophy was present; in one of these three cases a single pineal cyst was found, and cysts were absent in the other two; in the remaining cases cystic change were present in seven pineal glands out of fourteen.

2. Pineal cysts were not confined to any particular locality in the pineal glands examined.

3. Pineal cysts do not arise as well formed diverticula of the pineal recess, and are not lined by a single layer of epithelial cells in contact with each other, resembling those lining the ventricles of the brain.

4. In the formation of the pineal cyst, disappearance of the proper cells of the

gland occurs at the site of the cyst accompanied by an active transudation of fluid. At the same time hyperplasia of the neuroglia fibers all round the cyst takes place. In this way a neuroglial feltwork, often abundant, especially about the larger cysts, is formed surrounding the cavity and constituting its wall. The proper cells of the pineal gland are present in this feltwork in small numbers and do not form a well defined layer.

5. No relation between the presence and amount of brain sand and cystic change was observed.

Diphtheria from a Bacteriological Point of View.

Watson (Annals of Gynecology and Pediatrics, July, 1902) states that true diphtheria cannot exist without the presence of the Klebs Loeffler bacillus, and that no case can be absolutely diagnosed as diphtheria until this bacillus has been demonstrated.

Membranous anginas of sufficient severity to cause death may be produced by the streptococcus pyogenes, the micrococcus of sputum septicæmia, and perhaps by other varieties of bacteria.

Without a bacteriological examination, the form of infection cannot be determined; or, in other words, the clinical appearance of a case does not always, if ever, reveal its true character, although presumably the clinical diagnosis is correct in a majority of cases.

A bacteriological examination should be made in all cases when practicable, and negative results should not be taken into account unless two or three are obtained on successive days.

All cases having the clinical appearance of diphtheria should be treated as such from the beginning and until contraindicated by successive negative examinations. It is, of course, understood that one positive result is conclusive for diagnostic purposes.

Anginas not dependent upon the Klebs-Loeffler bacillus do not require the establishment of a quarantine, or the attention of the health officer.

Bacteriological examinations for release from quarantine would insure public protection against this disease, would shorten the average period of isolation, and materially lessen the expenses in a great majority of cases.

While laboratory examinations do not furnish an inflexible or infallible guide to the physician, they are a great aid to him in arriving at a correct conclusion in the case; in furnishing grounds upon which to make more positive assurances to the family; in strengthening his convictions as to the best line of treatment; in showing the

health officer the necessity or non-necessity for isolation; in indicating when cases may be released from quarantine; and, in fact, in placing the entire management of the disease upon a more scientific basis.

Treatment of Optic Atrophy.

D. Derby (Boston Medical and Surgical Journal) states that strychnine is a stimulant to the optic nerve. Even in normal eyes it slightly increases the acuteness of vision and widens the visual field. These effects are temporary (Fuchs).

In certain cases of optic nerve atrophy local subcutaneous injection has, to say the least, coincided with an arrest in the progress of the disease, and has been followed by a somewhat increased acuteness of vision. Whether these effects are temporary or permanent, time and fuller statistics will show.

In a progressive case of this disease it is clearly our duty to state the above facts to the patient, and allow him to take the treatment if he is so inclined.

The strychnine should always be administered in the temple, and by subcutaneous injection.

As regards the technique of these injections, make them in either temple alternately, using aseptic precautions. Begin with .04 of a grain and add .01 daily, until constitutional effects are observed, expecting generally to reach at least the tenth injection. By that time the temples are apt to be a little sensitive, so wait ten days, and then repeat the course. In some few cases a third course of injections has been found of advantage.

Hebephrenia.

W. R. Dawson (Dublin Journal of Medical Science, July, 1902) describes a case of this very uncommon disease. The patient, a lad of nineteen years, had always been solitary, had lived alone in lodgings, and had practiced self-abuse for about two years, though not to excess. For some months he had been depressed and felt that his appearance was changing for the worse. One day he threw himself into the sea with suicidal intent but changed his mind and swam out again. He showed little reticence in speaking of the matter or of his self-abuse, but was very miserable and suspicious, thinking that everything was being done to annoy and torture him, and that his sisters were not really related to him, etc. About ten days after admission to Farnham House, with tonics, cold baths and attention to the bowels he began to cheer up, but developed a neurotic tendency to bursts of causeless laughter. In about six weeks his delusions had practically disappeared.

One's general impression was that the mental symptoms were in many respects like an exaggeration of the frothy emotionalism, introspection and self-centredness of puberty, which had been thrown late in his case. The relation of hebephrenia to paranoid is interesting. The resemblance is considerable, but it would rather appear that whereas paranoia consists in a sort of gradual and progressive hypertrophy of certain peculiarities of the individual, hebephrenia is essentially a hypertrophy of the peculiarities found at a particular period of life in almost all individuals, and is, therefore, related to imbecility.

Abdominal Aorta Ligation for Aneurism.

Morris (Annals of Surgery) believes that the operation may be successfully accomplished in the near future.

Examination of the abdomen of a colored woman of twenty-four disclosed an epigastric tumor pulsating so forcibly that the beats were visible at a considerable distance from the patient, and the objective signs of aneurism of the aorta were typical of that condition.

For purposes of ligation, Morris chose a soft rubber catheter about 12 millimeters in circumference, to avoid injury to the tunica intima. The aorta having been isolated from surrounding structures for a short distance, the catheter was carried around it with the aid of an aneurism needle threaded with a loop of silk. The loop of catheter surrounding the aorta was then drawn tightly until circulation in the femoral arteries ceased, and a long clamp forceps held the catheter in place. This avoided tying. The ends of the catheter and of the forceps were allowed to protrude from the abdominal wound, which was sutured, with the exception of room for the ligating apparatus. The ligature was applied at a point about two inches below the aneurism and one and a half inches above the bifurcation of the aorta.

The operation may be done in about fifteen minutes by a person fairly skilful.

Nineteen hours after operation the patient could feel the prick of a pin over the vastus muscles, but the legs showed general loss of sensation. In twenty-two hours from the operation, the heaving, expansile pulsation of the aneurism suddenly began to diminish. In about three hours it had apparently disappeared.

The ligature was removed twenty-seven hours after first being applied. Sensation was restored and sphincter control regained. There was every hope of recovery, but on the following night she began to develop evidences of intense septicemia. She died fifty-three hours after the operation.

Technique of X-Ray Therapy.

Kienboeck (Interstate Medical Journal) recommends to those that have occasion to use the X-Rays in their practice the following points:

The physician should use a medium soft tube, placed just above the part to be treated, and at a distance of from 15 to 20 centimeters. The portion of the skin not to be treated should be protected by a sheet of lead, 0.5 millimeter thick, under which should be placed a strip of flannel to protect the skin from flying sparks. Tubes of high intensity should be employed, with rapid interruptions, the time being varied at each sitting according to the judgment of the operator.

The tube used must be capable of producing a good picture of the thorax of a medium-sized man, when viewed through the fluoroscope 60 centimeters from the focus. With an interrupter giving interruptions at the rate of twenty to thirty a second, a good skiagram should be obtained with an exposure of thirty seconds. Although a five minutes' exposure will produce a slight effect, a radiance lasting twenty minutes may be regarded as "normal exposure." The effect of normal exposure will be about as follows: On normal skin, after a period of latency of fourteen days, the hair will fall out, accompanied by an erythema lasting a few days; on the skin affected with sycosis the loss of hair will occur as early as the eighth day, accompanied by the formation of numerous pustules; lupus tissue will become exfoliated after a lapse of a week.

The effect of normal exposure of twenty minutes may be produced by dividing the action of the radiance over several sittings of shorter duration.

If there be taken into consideration the intensity of the radiance, the number of sittings, and the length of intermissions, there may be formulated these methods of X-Ray therapy:

Daily sittings, with the radiance of slight intensity, lasting five minutes, continued until the first symptoms of reaction appear.

Sittings, with a radiance of medium intensity, twice a week until reaction begins to be manifest (about two weeks); or three or four sittings, with a radiance of medium intensity, given on alternate days.

The "normal exposure" in a single sitting, and await reaction.

Modern Venesection.

Briscoe (Clinical Journal) closes a valuable paper on the subject with the following summary:

1. Careful incision; open the vein obliquely; shampoo limb if blood does not flow,

and apply the same to the other extremities; keep warmth to the body; to encourage the flow of blood, give an inhalation of nitrite of amyl, either with wet-cupping or with venesection pure and simple; after operation keep patient quiet in the recumbent posture and in a darkened chamber; administer milk and diluent drinks, and relieve the intestines with some suitable aperient.

2. In certain cases of heart disease, uncomplicated mitral regurgitation when compensation has become inadequate, there arises a gorged and distended right heart and lung with recurring hæmoptysis. From six to twenty or more ounces may be removed in these cases. After the operation, drugs like digitalis and diuretics, which have previously failed, will complete the relief.

3. Sudden deprivation of pure atmospheric air from a healthy lung causes the right heart to become distended and paralysed. This chemical origin of cyanosis is shown in bronchitis and in all gaseous suffocations, and the practice of blood-letting in these cases must be bold and thoughtfully considered. Venesection is thus the therapeutic agent,

4. To discriminate between two conditions:—(a) When a patient is much choked, laboring hard with his breath, and moreover with his veins distended, and the heart dilated, then bleeding is our sheet-anchor. It is obvious that with this state we get a small pulse, and when the distended right heart is emptied, the pulse becomes full. (b) On the other hand, the patient is choked with bronchitis, but his right heart is acting well. His surface wears a leaden hue from the free circulation of venous blood in his arteries. The pulse is good, but of high tension from the quality of the blood contained in the arteries. The venous system and the liver are not engorged. Bleeding is not indicated in this class of case, and is an instance of one of the errors and abuses of blood-letting. The right heart is quite able to take care of itself so far. As Dr. Hare, in *Good Remedies out of Fashion*, puts it, the right remedy in this class of cases is the "emetic." He says: "In suffocative bronchitis the effect of emetics is sometimes magical, and by their administration in such cases not only is immense relief given, but I verily believe—I am certain—that lives are saved." This, then, with respiratory stimulants is the proper treatment when the bronchial tubes are choked.

5. Avoid bleeding weakly people, broken down old men and drunkards. Venesection is also a doubtful agent in acute peritonitis; but a few leeches may give relief.

6. In capillary bronchitis and in pneumonia venesection may save lives. In the former, where there are signs of distension of the right heart; in the latter, when there is a large extent of lung involved, with symptoms of cyanosis and heart paralysis. In pleurisy of a diaphragmatic nature venesection is indicated. In pericarditis and pneumothorax, bleeding in the former is useful when orthopnea, irregular pulse, distended jugulars, and arterial anæmia are present, should these signs not depend upon excessive effusion into the chest. In the latter, when there is arrest of circulation in the collapsed portion. Again, in thoracic aneurism and tumors of the mediastinum, venesection is advisable, as it relieves painful tension and assists the action of iodide of potassium. Only a few ounces should be allowed to flow, so as not to impoverish the blood.

7. In acute nephritis and uræmia blood-letting is sound practice.

8. In lumbago and certain forms of headache of a congestive nature. Dry cupping will be useful in the former, and bleeding from the nose, by leeches, or by venesection, will give the necessary relief in the latter.

9. When symptoms of impeded venous flow are present in cranial affections, as indicated by labored breathing, surface veins full, and face congested, venesection is to be practiced.

10. Blood-letting should not be practised in a routine fashion.

Observations on "Caisson Disease" and Its Prevention.

MacMorran in the British Medical Journal says concerning the treatment, that nerve sedatives, such as bromides, especially ammonium bromide, have been found to be better than opiates, and in a severe case of pain cannabis indica gave great relief. Potassium nitrate, potassium acetate, and ammonium acetate are good in the convalescent stage, or when the pain diminishes, but may be given from the first with good results. By far the best treatment is the medical lock, into which, however, a purified air should be pumped till the pain goes, and then the pressure very gradually reduced. To effect this there should be attached to the medical lock an apparatus containing caustic soda in screens over which the air in passing would give up most of its CO_2 . Similarly the prevention of the worst form of caisson disease would be effected by getting rid of the CO_2 , where it collects in largest quantity, namely, in the shield where the men are working. This was done in the Greenwich Tunnel by running a blow-off tube down to

the shield and blowing off the air every hour, or oftener if necessary. The carbonic acid was reduced almost one-half in volume by this expedient alone.

Finally, all workmen about to be employed in compressed air should be subjected to a most searching medical examination, all new hands should be examined after work each day for a week, and the gang going off and that going on twice each week, and those who are indisposed kept above ground till well; should the pulse have a high tension the man should be kept under observation every day, and should there be a booming sound in the heart or reduplication of the second sound he should be suspended altogether. This entails great labor on the part of the medical officer, but the responsibility of allowing men to work when unfit is infinitely greater, and the freedom of those under his care from a disease of such a distressing nature is a sufficient recompense.

The Importance of Rickets in Girls from an Obstetrical Standpoint.

Bacon (The Clinical Review) states that rickets in infants is of great obstetrical interest. If the percentage of contracted rachitic pelvis in adults is a criterion, from 3 per cent. to 7 per cent. of female infants suffer from rachitis to a sufficient degree to affect the pelvic diameters. Early diagnosis is of great importance in these cases because it may be possible to arrest the disease before the osseous deformity in question has developed. Passing by certain equivocal signs, the discovery of beaded ribs gives the first assurance that the disease is affecting the bones. The indications are readily apparent, viz., to treat the underlying dyscrasia and prevent the pelvic deformity. The former is filled by appropriate diet, including some form of fat, sodium chloride, etc. The latter, however, which would appear to come under the head of orthopedic treatment, has been largely ignored. Recumbency, indicated in theory, is of course impracticable. It is possible that an apparatus might be devised to take the weight of the head and trunk from the sacrum. Careful measurements and radiography might inform us as to the progress or arrest of the disease.

The Bacteriology of the Skin and of the Glycerinated Lymphs.

McCrae [The Montreal Medical Journal] in his investigations found that specimens of glycerinated lymph of three different makes were recently found to be sterile. Points prepared by the same firms were sterile in but one instance, the others containing a single bacillus such as is ordi-

narily present in the air, hence relatively harmless.

In regard to the possibility of auto-infection from buried germs during the act of vaccination, it is theoretically demanded that the cuticle should be well scraped so that the sweatpores shall be laid open. If drainage is then secured such germs should be harmless; but if the vicious process of scabbing is encouraged, auto-infection should be directly favored, although only mild local sepsis would occur in the vast majority of cases.

Treatment of Early Mental Cases.

F. S. Wood (Lancet, July 12, 1902), reaches the following conclusions after a very thorough study of the subject. Like the experience of Raw and Springthorpe who recently published a classic paper on this subject in the Lancet, this author's observation has recognized many individuals whose temporary insanity disappeared after a few days of well-chosen treatment. Some patients recovered their mental poise with the removal of abdominal tumors, others with the cure of various bodily affections, and the vast majority of these temporary cases, after the alleviation of alcoholism. This he concludes is the most prolific single cause in this class of mental disease. Delirium tremens is the most familiar form, and is usually accompanied by signs of alcoholism at the time of the onset. There are also patients who without showing any symptoms of actual alcoholism do suffer from its ravages in the nervous system. Dementia is the next most frequent form with its well-known symptoms. Cure usually is complete in from one month to six months. Mania may have its origin directly in alcoholism or may follow delirium tremens and dementia. Sensory disturbances are also very common, especially of hearing, smell and taste, less frequently of sight. The author's confidence in the curability of most of all these cases led him to request the authorities to permit hospital-ward rather than asylum treatment. There is a provision of the British Poor Law permitting a two week's observation of any case of supposed insanity, if desired, prior to committing it to an insane asylum. He has availed himself fully and systematically of its terms during the past three years and has found that fully two-thirds of the patients do not require commitment, but are cured by ordinary hospital care. The stigma of having been to an insane asylum is very real, reacting upon all by preventing permanent and lucrative employment wherever the patient is known and upon the women by rendering them ineligible to marriage in the popular view. The author has

therefore induced the authorities to permit hospital observation of these unfortunates before pronouncing upon their hopeless insanity. Padded cells and mechanical restraint he has found to be rarely necessary. The presence of these temporarily insane patients in the hospital general or special wards affords an opportunity for their observation which the medical student would otherwise not have.

The Use of Adrenalin Chloride in Ophthalmic, Nasal, and Aural Surgery.

Green in the British Medical Journal records his opinion in regard to this substance.

The introduction of a solution of adrenalin chloride (1 in 1000) has removed the difficulties which hitherto have been met with in using fluid extracts of the gland of having a fluid always ready and active. This difficulty is very great during the hot weather, at a time when it is in great request in the treatment of hay-fever.

The solution requires dilution to the extent of 1 in 5000 for introduction into the nose and ear, and to 1 in 10,000 for instillation into the eye. The diluent should be either boiled water or sterilized salt solution, and the diluted fluid should be put into colored stoppered bottles. If exposed to the light the fluid becomes pink and later brick-red, but does not lose its activity. In ophthalmic work it has been found chiefly of use in inflammatory conditions of the conjunctiva, and its use is indicated in panus, iritis, keratitis, scleritis and acute dacryocystitis. He has not used it much in operations on the eye, but has tried it in one case of enucleation without benefit. He was disappointed at this, having previously used liquid suprarenal and chloretone, and had removed an eyeball without any loss of blood. In aural work its use is indicated in chronic otitis media suppurativa with exuberant granulations or polypi, and acute inflammation of the membrana tympani.

In nasal work it is chiefly of use in swelling and hypertrophy of the mucous membrane, and intranasal operations where a bloodless field is of importance, but the nose must always be plugged after the operation is finished, as hemorrhage may commence thirty to forty minutes after the application of the fluid, and is then often troublesome. This is especially the case in partial turbinectomy, and for this reason the author does not now use it in those cases. Of its value in the treatment of a stuffy nose from a cold in the head the author has had the most pleasant personal experience, the relief being rapid and lasting. Patients can insert the wool them-

selves if instructed how to twist it on the end of a match so that the wool projects well beyond the end of the wood; it is advisable to warn them that the application will smart for about forty seconds, and that the plug should be pushed up gradually, as after about a minute the mucous membrane shrinks and the wool slips in quite easily. The same advice applies to its use in hay-fever, in which it gives most brilliant results.

Management of the Anesthetic in Operation of the Respiratory Tract.

Mosher (Boston Medical and Surgical Journal) discusses the difficulty in operations about the mouth and the giving of the anesthetic, the main reason of the difficulty being that in using a cone or an inhaler, the etherizing and the operation cannot be carried on together.

He believes that the apparatus of Fillebrown and Rogers obviates this difficulty, this apparatus having been used in cleft palate operations for the last three or four years.

The etherizing is accomplished by playing a stream of ether vapor over the patient's mouth. A water-bath keeps the ether from freezing in the bottle in which it is vaporized, and the ether is forced through the tube and into the patient's mouth by a bellows. A valve in the stopper of the ether bottle gives the etherizer a simple method of administering any strength of ether and air desired. A shielded alcohol lamp keeps the bath room warm.

It has been abundantly proved that chloroform is dangerous in adenoid cases or in cases where much mucus is developed. Less vomiting follows if gas is used to start with, and the patient does not seem to get so saturated with ether afterwards, and comes out sooner.

In the matter of position, the point to be aimed at is to get the light on the part which is being worked upon. The upright position accomplishes this best. There is less bleeding. The head can be bent back and turned to the side so as to show either tonsil, as required. If the head is regularly tipped forward the blood will run out of the nose and the mouth instead of down into the throat.

As to holding the patient, the arms of the nurse should lie in the bend of the child's hips. If the patient is anything more than a baby, a nurse can be dispensed with for holding; the assistant puts his left leg in the chair back of the patient, grasps the patient's hair and holds the head against his knee.

In all the more extensive operations it is well to have the etherizer free to confine himself to the ether alone.

He says that those who give atropine as a routine measure before operating to prevent the formation of mucus would seem justified in this, from the fact that atropine has prevented death in the case of animals subjected to rough manipulation in the pharynx or upper larynx.

Bladder Exstrophy and Ureter Transplantation Into the Rectum.

Peters (Canadian Journal of Medicine and Surgery) has obtained very satisfactory results in three out of four cases of transplantation of the ureters into the rectum for exstrophy of the bladder. The operation in the third case was followed by death on the fifth day, from acute ascending infection.

The first step in the operation is to insert a soft-rubber catheter, about No. 5 to 7, into each ureter, passing it in about $2\frac{1}{2}$ or 3 inches, so that its upper end reaches beyond the curve of the ureter over the brim of the pelvis. The catheters are stitched in by passing a very fine silk suture through the wall of the catheter, and then through the wall of the papilla, and are allowed to remain in position for from twenty-four to sixty hours.

The next step consists in dissecting out the distal ends of the ureters with a fair-sized rosette of the adjacent mucous membrane and muscle wall of the bladder. The safest and easiest method is to commence the dissection at the portion of the papilla nearest the pubes; here the ureter will be uncovered by the peritoneum. A cellular space is soon entered, through which the ureter with its contained catheter can be easily felt. With the finger in this space, the dissection is proceeded with, care being had not to injure the peritoneum, which lies very close to the ureter at the upper part. It will be found when the circular rosette of bladder tissue has been completely separated that the remainder of the ureters can be easily dissected free, and, without any traction, care should be taken to follow it back in its curve, so that, when transplanted into the rectum, it will run practically in a straight line from the brim of the pelvis to its new situation in the wall of the rectum.

Attention is next directed toward laying bare the lateral wall of the rectum, largely by blunt dissection. The process is very greatly facilitated by the presence of one finger of the operator or his assistant in the bowel. The absence of the pubic arch renders it comparatively easy to lift the rectum toward the wound of operation, and thus bring it almost to the surface. If care is taken to keep well to the lateral aspect of the pelvis during this dissection, and to approach the rectum from this direction,

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the peritoneum is not endangered; but this portion of the operation should be conducted with extreme care, as it is difficult to tell how low down the peritoneum may reach in these abnormal cases.

The point selected for planting the ureter is that on the lateral aspect of the bowel just above the internal sphincter. The ureter can be brought to this position without the least trouble.

Having thus determined upon and exposed the seat of implantation, a pair of forceps is passed into the rectum, and pressed against the selected spot. A slight cut is now made from the external wound upon the end of the forceps; this is forced through, and the little wound dilated very accurately, so that it will receive snugly and yet without compression the ureter with its contained catheter. The forceps is then passed through and made to seize the end of the catheter, and this is drawn through the rectal wound and out of the anus. The forceps is then passed back beside the catheter through the same opening and made to grasp lightly the distal end of the ureter, or rather its rosette of bladder tissue, and this is now carefully conducted through the opening and made to protrude into the rectum. Very great care should be taken not to injure the ureter during the operation.

The same tactics are repeated upon the opposite side. Thus the ureters are drawn through so that their distal ends, together with the rosette of bladder tissue, are made to project into the rectum as two prominent papillæ. The catheters, of course, pass out through the anus, and are directed into the mouths of separate bottles containing a solution of carbolic or boracic acid. In this way one can ascertain whether both kidneys are working, and if one catheter should become plugged (as happened in one case) with urates or phosphates, it may be immediately withdrawn.

No effort is made to stitch the ureters into position. In order, however, to support the delicate ureters in their new position, and to prevent the injurious effects of any extravasation that may occur from the rectum to the wound in the pelvic cellular tissue, the wounds are packed on each side fairly firmly with iodoform gauze. This is left in position for two or three days, and when removed it is found that the parts fall together without, as a rule, allowing any extravasation from the rectum; or if there should be any, as happened in the third case, the gauze affords sufficient drainage, and the wound heals quickly by granulation.

Gangrenous Intussusception in a Child Four Years Old; Intestinal Resection; Recovery.

Dowd, in *The Annals of Surgery*, describes the case of a child who showed symptoms of prolonged intestinal obstruction, viz.: constipation, persistent vomiting of intestinal contents, tympanites, emaciation, the retention of a good temperature, and a fairly good pulse. Laparotomy showed that there was an intussusception about the middle of the ileum, about two and a half inches long. The intestine below this was empty. On gentle manipulation an opening appeared through the intestinal wall, which was gangrenous at the site of intussusception. The intussusception, two or three inches of intestine at each end of it, and a gangrenous piece of the mesentery were excised. Much gas escaped from the upper intestinal end, also intestinal contents; after this the coils of intestines which had been so greatly distended, and which had been kept in hot, moist towels, could be returned into the abdomen. The intestine about the excised portion was washed repeatedly in warm saline solution. A circular enterorrhaphy was then done. The first row of stitches passed through all the layers of the intestine and brought the peritoneal surfaces into close apposition at the margin. At the mesenteric border they were so placed as to obliterate the dead space there and hold broad peritoneal surfaces together, well supported by intestinal wall. A second row of Cushing stitches was then taken outside of this, and this was in certain places reinforced by a third tier of similar stitches. The intestine was then returned into the abdomen and thorough irrigation with hot saline solution given. The abdominal incision was closed with tier sutures. The child made an excellent and uneventful recovery. The writer says that the case suggests several topics which are important in the management of irreducible intussusception. The author mentions only two: 1. Intestinal resection versus the making of an artificial anus. 2. The method of uniting the ends of the resected intestine. As to the first, one hardly feels justified in making an artificial anus in gangrenous intussusception. As to the method of uniting the ends of the resected intestine, he reviews the various ones in use and declares his preference for an end-to-end suture with an inner row of stitches through all the layers of the intestine and an outer row through the outer layers. This was the method used in the case described, and, although it was independently worked out, it possesses the essential elements of the method of Frank.

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Taking into consideration all the possibilities of error in statistics which are taken from various operators instead of from a single institution, we may feel that the results are favorable to the use of through-and-through stitches. Most surgeons, however, do not feel it safe to leave such a row of stitches without reinforcing them by a second row of superficial ones. When so reinforced any infection which might follow the stitch is much more likely to work its way on to the lumen of the intestine along the thread than to push the peritoneal adhesions apart and force its way into the peritoneum. The time consumed in applying these two rows of stitches differs little from that required for the application of a Murphy button. The suturing can be completed in fifteen minutes without hurrying.

The Etiology of Hodgkin's Disease.

Dodson, in *Pediatrics*, reports a case of this disease. There was a general enlargement of all the superficial glands of the neck, varying in size from that of a large filbert to a hen's egg. The glands were not in the least tender, even on firm pressure, nor was there any evidence of inflammatory process about them. There was no indication of pressure on the vessels, nerves, or other structures of the neck; no enlargement of the axillary, inguinal, or abdominal glands could be detected. The spleen was not palpable; temperature 99 deg., pulse 100. There was at no time pronounced leucocytosis. A diagnosis of lymphadenitis was made, probably of tubercular origin, though the possibility of Hodgkin's disease was noted. A small gland was removed, but careful examination failed to show any of the usual appearances of a tubercular process, and carefully stained sections showed no bacilli. The failure of the tuberculin tests previously made, and the result of the microscopic examination of the gland removed, seemed to warrant the exclusion of tuberculosis, and the case was considered to be one of Hodgkin's disease. The patient was placed on Fowler's solution, in increasing doses, and at his last appearance there was a noticeable diminution in the size of the gland. It may be objected in this case that the diagnosis of a chronic lymphadenitis cannot be excluded, but the writer thinks that the apparent absence of any antecedent affection of the throat, of pain and tenderness in the glands, of periadenitis, or any tendency to suppuration, and, finally, a characteristic appearance of the gland removed for examination, speak strongly against such an opinion. This case seems, therefore, to have been one of Hodgkin's disease, not of tubercular origin. That

this disease is of infectious origin is extremely probable, but the infectious agent is as yet unknown to us, though doubtless cases of tubercular and syphilitic disease of the lymphatics may simulate it closely and may have been mistaken therefor. In case of doubt as to the tubercular character of the disease, tuberculin should be carefully and thoroughly tried, and, this failing, one of the glands or a portion of one should be removed, carefully examined for the presence of tubercular lesions and of bacilli, and then emulsified with sterile water and inoculated into guinea-pigs.

Bright's Disease in Children.

Henry Ashby, in *The Practitioner*, states that it is hardly necessary to remark that the systematic examination of the urine of sick infants and children is just as important as the examination of the urine of adults, and that unless such systematic examinations are made renal complications will certainly be overlooked. The common type of nephritis in childhood is the acute or subacute type of inflammation, with exudation of blood and fibrin which more or less choke the tubules, and the urine in consequence is dark in color and albuminous. Chronic nephritis is much less common, and is usually the result of repeated subacute attacks. There is also the septic form, which differs from those already described in that the inflammation is local rather than general, while the chief feature is an exudation of leucocytes from the vessels, and there are often minute points of suppuration; and reference must also be made to the toxic degeneration changes which are associated with the acute febrile disorders, more especially diphtheria, though these can hardly be classed with nephritis. In 3,000 cases of scarlet fever that have been under his care in the fever ward of the Manchester Children's Hospital, nephritis supervened in from six to seven per cent of them. Acute nephritis in rare instances is a sequel of certain other specific diseases besides scarlet fever. It is comparatively common for it to occur without any history being obtainable of some previous acute disorder. In these primary cases the onset is often insidious, and it may happen that no previous examination of the urine has been made till the puffy white face suggests kidney disease. It is this insidious type which is met with in children under 2 years of age when it is not scarlatinal. Very little can be said about the treatment of nephritis which is not the common property of every text book—there is unfortunately no drug known that in any way modifies or checks inflammatory or degenerative changes in the kidneys. Fortunately recovery from scarlatinal ne-

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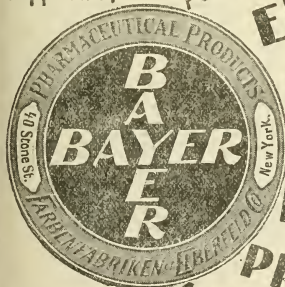
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phritis is usually complete and permanent if the patient is placed under favorable conditions, though in some instances it may be prolonged and tedious. After the acute process is over small quantities of albumin may from time to time be detected in the urine, especially if the patient is allowed to get up and go about. During the acute stage there can be no two opinions with regard to the importance of keeping the patient in a horizontal position, clothed in flannel, and surrounded by blankets, with perhaps several rubber hot-water bottles in the bed. For the first two days or weeks a diet consisting of from one to two pints of milk in the twenty-four hours, freely diluted with warm barley water or some thin gruel, should be given. Warm baths are beneficial, and should, of course, be brought to the bedside of the patient. Excessive purgation is to be avoided, unless there are symptoms of uremia. When the acute stage is over a more liberal diet may be allowed: eggs, toast, cooked vegetables, and rice pudding are allowable, while meat and meat extracts are best avoided until the kidneys are on full work again. In the more severe cases, when there is much edema, scanty urine, and perhaps troublesome uremic vomiting, treatment becomes a much more serious problem. Hot-air or vapor baths act on the skin much more powerfully than simple warm baths, but even these at times will fail to make the patient sweat freely. Philocarpine and jaborandi are apt to depress; smart purgation with calomel and euonymin will be necessary if the vomiting is troublesome. Diuretics are mostly disappointing, the best, perhaps, being the citrate of caffeine. Digitalis and strychnine should be given if there is any evidence of cardiac dilatation or a failing heart. Chloroform is useful to check the violence of uremic convulsions, and injections of morphia [one-twentieth to one-tenth grain] may be safely given, the danger of this drug in kidney disease having been greatly exaggerated by some writers. In chronic nephritis, when there is albuminuria and no acute or subacute symptoms, the great thing is to place the patient under the most favorable life conditions. Too much bed and indoor life is a mistake, and no good can come of long periods of a purely milk diet. A varied diet must be prescribed, consisting in the main of vegetables, eggs, and milk, and an out-of-doors life in a warm climate.

The Personal Factor In Microbic Disease.

Mackenzie, in the *London Lancet*, mentions particularly the importance of the soil in cases of tuberculosis as being a matter of which we must take most account. The writer holds that the microbe is com-

paratively unimportant of itself, but that it is too great a stretch of truth to say that tuberculosis is one of the more curable diseases. We may arrest tuberculosis under our treatment, but we cannot make sure that it will remain inactive. One point, however, to which he calls special attention, is the fact that the decrease in the mortality from consumption which has been going on for the last fifty years, not only in Great Britain, but also in other countries where statistical evidence is available, preceded the exact knowledge which we now have of the pathology of tuberculosis and the discovery of the bacilli. This diminution was going on under unfavorable conditions before any effective measures were begun to destroy or disinfect the sputa or separate the sick from the healthy. It has also gone on in spite of the great migration from country to town. There is no doubt that it has been due to measures which have increased the resistance by improved sanitation, better drainage, sewerage, and better housing, clothing, and feeding of the population. The author refers to other diseases, such as rheumatic fever and appendicitis, calling attention to the fact that whether we establish the bacterial nature of rheumatism or not, the personal factor will be as important in the future as in the past, and our clinical acquisitions will not be lost. Similarly with appendicitis, which seems on the other hand to be more common, thus reversing the conditions in tuberculosis, there seems to be, as Treves has remarked, not infrequently a family of hereditary tendency. We must bear in mind in all these groups of diseases, he thinks, that the soil as well as the seed is of utmost importance.

A Rare Complication of Hernia.

Travers in the *London Lancet*, reports a case of a woman sixty years old who had a small umbilical hernia and suffered for years from winter cough. On February 20th a severe fit of coughing occurred and caused something to "give way" in the abdomen. Upon examination her physician found a mass of intestines protruding from an aperture at the side of the hernial swelling. Operation was absolutely necessary, but could not be done at her cottage. Her extruded bowel was wrapped in warm cyanide gauze, temporarily supported with bandages and the patient was removed to the West Kent General Hospital, a matter of difficulty because she weighed two hundred and twenty-five pounds. She showed shock upon arrival. Ether was at once administered; the abdominal wall was cleansed and the gauze wrapping removed and six feet of small intestine were found to be protruding from a rent one and



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one-half inches across in the site of the umbilical hernia; the gut was irrigated with chinol solution, one in twenty-five hundred, and wrapped in warm sterilized towels; the wound in the skin was enlarged until the bowels could be replaced; a portion of omentum adherent to the interior of the sac was ligatured and removed and the walls of the sac were freed and sutured; the sides of the opening in the fascia were brought together by a continuous suture and after cutting out the portions of skin around the rent the wound was closed. Although after the operation the patient's condition at first improved somewhat, she later sank rapidly and died of heart-failure thirty-eight hours later. There were no ulcerations over the point of the rupture, and no stretching or thinning of the skin. The sac and the skin were considerably thickened and had apparently torn in a straight line without any previous warning. Probably the patient's obesity and the loss of elasticity of the skin accounted for the accident.

Plague as a Soil Infection.

F. Farrar (British Medical Journal, August 16th) summarizes evidences to the effect that outbreaks of bubonic plague are dependent on the infection with a specific microbe of soil contaminated with the excreta of rats or other animals that have suffered with the disease; and that, except in pneumonic cases, infection is ordinarily the result of direct inoculation from the soil, the element of personal communication being a factor of relatively small importance. It is a significant fact that the policy of evacuation of infected villages so long a custom in India, is always highly successful. Evacuation checks an increasing epidemic, lessens mortality, and if promptly carried out in villages, tends to arrest disease *in toto*. Even more conclusive as to soil infection is the fact that such cases of plague as do sporadically occur in health camps after evacuation has been carried out, occur almost exclusively in persons who have surreptitiously visited their homes against orders.

The terrible susceptibility of the people of India to plague lies in the fact that they are a barefooted race. Further, most of them have chronic abrasions due to badly fitting toe-rings. To well-shod and well-clad Europeans, plague is very little dangerous. The author emphasizes the fact that mortality among rats almost invariably precedes an epidemic of human plague. This connection is well known in India, where plague is often termed the rat disease.

Plague, when it is introduced by persons, may readily be exterminated; when it is

introduced by rats, followed by infection of shore rats, it has come to stay. To exclude plague, our energies must be devoted not merely to the exclusion of plague-smitten persons and plague-infected articles, but even more earnestly to the exclusion of rats. Safety lies in rat-free ships.

Syphilis of the Bladder.

Margoulies, in Inter-State Medical Journal, says that it is rather surprising that works upon syphilis are peculiarly silent upon syphilis of the bladder. This is not so much because it does not occur as because it seems to escape recognition. After calling attention to a few evident cases in French, Russian, German, and American literature, the author reports three cases of his own: one showing a tumor-formation at the *bas-fond*, one an ulceration, and the third a hæmorrhagic cystitis, all of which resisted other modes of treatment, but yielded steadily and rapidly to specific treatment.

While there are no particular specific symptoms by which syphilis of the bladder may be diagnosed, we must consider the possibility that the pains are of a syphilitic character, particularly if the history indicates that the patient has contracted syphilis, or if there are any manifestations from which we might suspect it. More especially is it indicated if the local symptoms of the bladder are severe while the patient's general health remains good and the composition of the urine is but insignificantly modified. Finally, in doubtful cases, after a more or less prolonged treatment by other means without result, it is indispensable to essay the antisyphilitic treatment, which, if it gives good results, confirms the diagnosis. By means of the endoscope we can watch not only the original lesion, but also its retrogression, disappearance, and whatever cicatrix it may leave.

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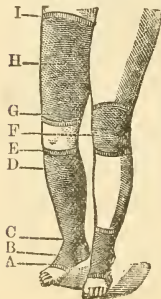
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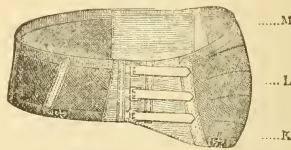
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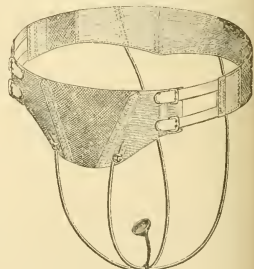
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E. N. Smith (The Lancet. No. 4113) says that division of the contracted sternocleidomastoid is usually required to cure this deformity. It is sometimes necessary to divide a portion of the trapezius and deep cervical fascia. A retentive apparatus is seldom required at any period of treatment. The muscles may be severed by open incision or subcutaneously. The former is to be preferred as a rule, while the latter may be practised if the sternal end of the muscle is to be divided. A vertical incision of the skin does better than one which is transverse, for cosmetic reasons as well as for convenience.

The incision should be about one and three-quarter inches in length from the level of the clavicle upwards and should expose the edge of the clavicular portion of the sternomastoid. The muscle can be care-

fully cut through from without downwards. Oozing of blood having ceased the wound must be stitched up and treated in the ordinary manner, a large pad of gamgee tissue or other soft dressing being applied to effect gentle pressure. The patient's head should then be placed in a perfectly straight position or even a little bent towards the side opposite to the affected muscle and fixed in position by sandbags placed on each side of the head, the patient lying supine. No other method of retention is necessary unless the child should be very unmanageable. The divided muscle usually reunites rapidly and about from a week to ten days in bed in the one position suffices usually to allow a fairly firm union to take place. After this it is generally permissible for the patient to sit up in bed and in the course of a few days to get up and move about cautiously. At the end of three weeks the patient should have recovered from the operation.

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LITERATURE OF VALUE UPON APPLICATION.

ADVERTISEMENTS.

How to Assist Young Girls to Womanhood.*

The primary establishment and the menopausal cessation of menstruation are the two crucial physical epochs of woman's life. The change from maidenhood to womanhood is one that involves the whole body, and manifests itself alike in the form, the voice and the sexual and nervous phenomena. In an ideal state of perfect health this transition into puberty should be as natural and uneventful as gliding from sleep into consciousness. Owing, however, to the present civilized modes of living, the cerebral development of young girls is fostered and forced to a degree that deprives the remaining tissues and organs of their necessary nutrition, and too often we are called upon to treat delicate girls that are like buds blasted in the blossoming. Many a woman traces back a prolonged existence of semi-invalidism to exposure and lack of care at the early menstrual periods. Tight lacing also predisposes to pelvic disorders by interfering with circulation and exciting uterine displacements. The strain of puberty upon the nervous and blood-forming structures may be too great in a subject hereditarily deficient in vital resistance and adaptability. So we may count among the morbid incidents more or less peculiar to puberty, chlorosis and anemias, general debility, neurasthenia and hysteria, acute pneumonic phthisis, chorea and hebephrenia.

According to Emmet, more than half of all women who have suffered at puberty from menstrual derangements are sterile and delicate in after life. Skene has stated that his observations showed that the vast majority of incurable diseases peculiar to women originate in imperfect development and consequent derangement of function. This development is either primary, during the embryonic stage, or secondary, at puberty. Defects in the former are irremediable, whereas secondary deviations from the normal standard are both preventable and curable in most instances.

It is important in connection with the subject under consideration to bear in mind the essential reciprocal relations of the reproductive system and the general organization. As Virchow says, all the specific properties of woman's body and all her womanly characteristics, depend upon her ovaries. In other words a woman is not fully a woman unless her sexual development is natural and complete and in line with a healthy general organization. A

beautiful illustration of sexual dimorphism has been furnished by Prof. Max Weber (quoted by Skene), who presented the case of a chaffinch in which the left side of the body had the female coloration and the right side that of the male bird, the two colors being sharply limited at the middle line. The bird was a hermaphrodite with a well-developed ovary on the side of the female plumage, and a testicle on the opposite side. The phenomena of menstruation offer the most palpable evidence of the onset of puberty. The precise nature of this rhythmic cycle is over-shadowed by a jungle of theories, and, as Millikin well says, we can do no better in the present state of our knowledge than accept menstruation as a habit which has been nailed upon our race by hereditary, and which is for us an ultimate biologic fact.

Normal menstruation in temperate climates generally begins in the fifteenth year. In the tropics it appears much earlier, so that in Mexico one may see a grandmother of only twenty years. Within the Arctic Circle Eskimo girls do not generally arrive at puberty until the eighteenth year. City girls usually have the menstrual flow earlier than do hard working country girls, in whom muscular exercise has the same derivative effect on the pelvic blood supply as too intense devotion to study. The time, amount and character of the menstrual flow vary normally within wide limits. The menstrual cycle for different individuals ranges in perfect health from two to six weeks. The average duration in the temperate zone is about four days. Soaking more than three napkins daily is considered abnormal. Anemic girls, as a rule, tend to menorrhagia; chlorotic ones, to scanty menstruation. Clots are present when the amount of blood is great, or the mucus and fatty acids scanty. A periodic white menstruation, from supersecretion of the uterine glands, is not infrequently noticed in the intervals midway of menstruation.

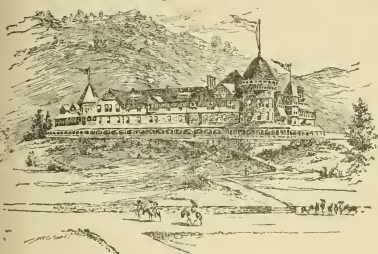
Menstruation is or should be a perfectly physiologic process. In the virgin disorders of menstruation of whatever nature are nearly always dependent upon the defective nutrition of the reproductive organs, and this in turn upon a blood supply insufficient in quality or in quantity. In the great majority of cases, therefore, our efforts to aid nature in effecting the transformation of the girl into a woman, should be in the line of a happy balance of nutrition between the special female organs and the body as a whole.

Hygienic measures are of the first importance. Fresh air and sunshine are always in order. Exercise is especially indicated

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for the fat and flabby chlorotic girl, and her diet should be restricted in sugars and starches. The highly active, intellectual girl must rest from her studies and try to become a little lazy. Proper precautions should be taken in regard to reasonable care of the person at the time of the monthly periods. Yet the physician should beware of unduly alarming his little patient, and so bringing about a condition of hypochondriacal valetudinarianism. Simple cleanliness is certain to do no harm, but good. The conservation of the general health and vigor is the chief factor in maintaining safe and easy menstruation.

In spite of hereditary defects, if the physician could have full control of the diet, clothing, hygiene and environments of the little girls in his clientele up to the date of puberty, but little if any medication would be then required. Unfortunately, however, the lack of harmonious development in the preadolescent period necessitates considerable medical attention to secure a normal course for the critical metamorphosis of puberty, whose influences, as Dudley remarks, are fundamental, not only in the reproductive organs, but in the entire woman. Actual pain at the menstrual period in the young virgin may be considered always pathologic, and the same is true of menorrhagia or very scanty menstruation. Such abnormalities of function should direct our attention to the state of nutrition especially. The obese, chlorotic girl must take more exercise; the thin, delicate, sensitive girl, more rest. Fresh air and sunshine are needed in every instance. Red meat, eggs and other blood-forming foods should be taken in such quantities as can be well borne. The appetite for wholesome nutriment should be encouraged, if need be, by stomachic stimulants, such as the official elixir of strychnin, pepsin and bismuth. The use of bromides, coal-tar analgesics and diffusible stimulants at the menstrual periods can be regarded only as a temporary makeshift.

The most constant and positive clinical signs of imperfect puberty is deficiency of the blood in red corpuscles and hemoglobin, the chlorotic type being perhaps more common than the simple anemic in relation to menstrual disorders. Hemic defects and malnutrition act reciprocally as cause and effect. The oxidizing life of the blood is in the iron it contains, with about one-twentieth as much manganese. The total iron of the adult body amounts to but 2.5 or 3.5 grams, chiefly in the form of hemoglobin. The normal daily content of iron in the food of an average diet, is, according to Stockman, from five to ten milligrams. When absorbed, as in health, this

food-iron replaces the metal continually lost by disintegration of blood corpuscles and excretion. The round of iron in the body seems to be from the duodenum to the mesenteric glands, thence to the thoracic duct, the general blood current and the spleen, from where it passes to the liver to be synthesized into hemoglobin for the red cells, on the breaking down of which the dissociated iron is eliminated by way of the large intestine.

The use of iron in anemic and chlorotic conditions is, of course, a cardinal principle in therapeutics. In girls becoming women to supply a deficiency of erythrocytes or hemoglobin, one might infer at first thought that the best method would be to administer hemoglobin, that is, blood in some form. Chemistry proves, however, that when hemoglobin is taken into the stomach it is changed by the acid there to hematin (causing the coffee-ground color of small gastric hemorrhages,) which, according to Cloetta, passes down the alimentary tract without being absorbed.

Most authorities conclude that inorganic compounds of iron in order to be absorbed must first be changed to albuminates by combining with food matters. All albuminous substances are hydrolyzed to peptons before they are capable of absorption. Hence it follows that a peptonate of iron is the preparation most likely to be readily and completely absorbed and assimilated. The best remedy of this composition, I think, is Gude's Pepto-Mangan, which I have used for the past ten years with great satisfaction, particularly in the hemic and nutritive disorders of female puberty.

This neutral solution contains three grains of iron and one grain of manganese in each tablespoonful. The latter ingredient is doubtless to be credited with a large part of the nearly specific effect of the remedy in functional menstrual derangements. The preparation is pleasant to the eye, agreeable to the palate and has the great advantage over inorganic iron compounds of not corroding the teeth, deranging digestion nor inducing constipation. According to the nature and severity of the case, the dose varies from a teaspoonful to a tablespoonful. It is well taken in milk or sherry just after meals.

The following brief clinical notes may serve to illustrate the facts above stated. The blood count in each instance was made with the Thoma-Zeiss hemacytometer; hemoglobin was calculated by the Hamerschlag specific gravity method. I need hardly remark that the blood findings at the altitude of Denver are normally higher than at points near sea level.

Case 1. Jose K., 15 years, thin, deli-

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Rheumatism

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cate and somewhat strumous, had menstruated irregularly and intermittently for 16 months; erythrocytes 3,600,000, hemoglobin 58 per cent. She was taken out of school, put on a diet largely protein, given aloin, strychnin and belladonna pills for her bowels, and for her blood, Pepto-Mangan (Gude), a dessertspoonful four times daily after eating. Under this treatment she made an average weekly gain of 1½ pounds in weight, about 150,000 red cells and 3¾ per cent. hemoglobin, and was discharged cured in ten weeks.

Case 2. Alice R., 18 years, rather stout but pale, with greenish tinge; complained of palpitation and breathlessness on slight exertion; menstruation barely begun and scanty. She was made to take gradually increasing exercise on her bicycle, a cool bath every morning, less carbohydrates and more proteins in her diet, and Pepto-Mangan (Gude) in the dose above mentioned. She recovered from all her morbid symptoms within four months, and has since married and given birth to two healthy children.

Case 3. Amelia B., 23 years old, an overworked servant girl, had suffered since the periods first began, nine years before, with marked dysmenorrhœa, the flow being prolonged but rather scanty. The red blood cells numbered 3,800,000 per cu. m. m., with proportionate oligochromia. She was induced to rest at home and take six eggs daily, along with other nourishing food and Pepto-Mangan (Gude), a dessertspoonful four times daily an hour after food. She made a very rapid recovery, the red cells running up to 4,900,000 within two months and the menstrual periods becoming quite normal. By exercising proper care she has remained well for the past eight years.

Case 4. Olive M., 13 years, blonde, thin, active, sensitive, a hard student, just beginning to menstruate, the flow being scanty and accompanied with pain. The blood count was 63 per cent. of normal, the color index 57 per cent. Under treatment similar to that mentioned in the first case, she became round and rosy, menstruated freely and easily, took on 17 pounds in weight and raised the blood findings above the normal at sea level, all within eight months.

Case 5. Fannie R., 17 years, active, ambitious, intelligent, had such excruciating pain all through her menstrual periods for two years as to cause actual wasting. Physical examination revealed nothing abnormal except an undersized uterus. She was given Pepto-Mangan in tablespoonful doses three times a day, and was told to lie with the head lower than the hips. After

three months treatment the periods became quite painless, and have remained so for five years.

Case 6. Flora J., 16 years old, began to menstruate profusely a year before, since which time she has been always ailing; erythrocytes 3,100,000, hemoglobin 63 per cent. She was given cool baths and massage, a bitter tonic, laxatives and Gude's Pepto-Mangan in dessertspoonful doses. When discharged cured, five months later, the blood count was 4,700,000, hemoglobin 95 per cent.

Case 7. Maggie W., aged 15, clerk in a department store, was extremely chlorotic (hemoglobin 28 per cent.), with a soft, systolic basic murmur and some symptoms of gastric ulcer; menstrual menses but no flow. She was kept in bed at home, fed largely on meat, fish and eggs, and was given Pepto-Mangan (Gude) thrice daily a tablespoonful at a time. The functional murmur soon disappeared, the iron in the blood came gradually up to normal, the patient lost in weight as she gained in health, and menstruation appeared regularly.

Case 8. Nora R., 14 years, healthy in appearance but neurasthenic; no trouble with menstruation, except at this time she became more nervous and developed a rapid pulse and some swelling of the thyroid gland. For this incipient exophthalmic goiter she was kept in bed with a cold pack over the thyroid at the menstrual period, and was given Pepto-Mangan (Gude) steadily for six months in dessertspoonful doses. She has been quite well and free from the symptoms mentioned for over a year.

In conclusion the writer would like to emphasize the peculiar physiologic efficacy of Pepto-Mangan (Gude) in aiding young girls to a normal womanhood, when the crisis of puberty is complicated with any defect in blood-making and nutrition. Its action is prompt and pleasant, and the clinical benefits derived from its use are readily apparent to all concerned. In curable cases it is as nearly specific as any combination of drugs could be.

Where there is impaired indigestion, alimentary derangement, defective nutrition and an anæmic condition of the system from any cause whatever, I have found Trophonine as a delicate, non-irritating nutritive, reconstructive, health-building tonic, the remedy par excellence.

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Dryden Springs San., Dryden, N. Y., Aug. 25, 1902.

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I used your Terp-Heroin (Foster) in two cases of acute and one case of purulent Bronchitis with satisfactory results and in one case of Pulmonary Tuberculosis, I gave it with Port Wine with apparent relief to the patient.

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Chicago, Ill.

I had long been looking around for a simple yet effective remedy to relief cough and have found it at last in Terp-Heroin (Foster).

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DR. MERCER,
Phila., Pa.

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Papine.

In discovering this drug Battle & Co. has conferred a lasting favor on the medical profession. We know the opium of which they make their Papine is the best. Papine has a place in my medicine case and it is emptied as often as any vial in the whole case. I nearly always have a bottle with my obstetrical cases for after pains and always feel like it will do the work. I used it lately on a case of threatened abortion with excellent results, also in a case of severe uterine colic, I find that with Papine I do not have to use my hypodermic syringe so often.

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Wyatt, Texas.

The physiological depressions and neuralgias, so common in the period following a debauch, are lessened, or disappear altogether, by the use of Celerina.

Substitutors Steal Physician's Patients.

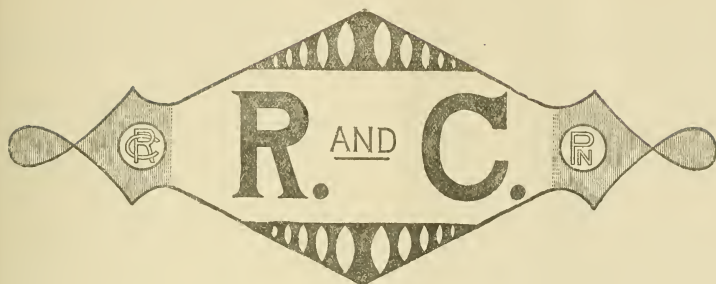
Incidentally, the Antikamnia Chemical Company is after "Counterfeiters" and "Substitutors" with a sharp stick. Their work in New York City is, no doubt, well known to our readers and they have now broken up a counterfeiting gang in New Orleans.

There can not be two views on the subject of substitution. It is swindling, pure and simple. Antikamnia and Antikamnia Tablets are made only by The Antikamnia Chemical Company, of St. Louis, Mo., and when a physician prescribes either Antikamnia Powdered or Tablets he means the products of that firm. If his patient does not get them, a fraud is perpetrated, not only upon The Antikamnia Chemical Company, but upon the physician and his sick patient for whom the medicine was intended.

In other words, the doctor's patient is taken out of the doctor's hands, transferred absolutely to the Substitutor's care and then given whatever remedy the substitutor thinks best. All this, irrespective of the doctor's diagnosis. In short, the treatment is in accordance with the "diagnosis" made by the substitutor. And as all substitutors are thoroughly saturated with avarice, greed and utter disregard of the most sacred rights of others, the fate of their victims can well be imagined. It is the purpose of The Antikamnia Chemical Company to expose and punish this crime wherever they locate it, and they have notified the trade that the least punishment "Substitutors" of this kind can expect, is exposure of their guilt.

The great demand for X-ray and Electrical apparatus, and most especially for "The Sorensen," can hardly be illustrated any better than by the fact that a new Company has been incorporated in Ravenna, Ohio, with a capital stock of \$25,000, for the manufacture of such goods. They have bought out the Grand Rapids & Toledo Companies as well as the old plant where the "Sorensen" was made in Ravenna, and they are now building a factory with about 25,000 square feet of floor space in addition, making it the largest factory in the world for the manufacture of such goods.

The name of the new firm is "The Sorensen Mfg. Co." and they are pleased to see all of the customers of the three Co's they are succeeding, as well as all others, who wish to get acquainted with their goods.



Feed Your Typhoids

TROPHONINE

They need a highly nutritious, easily assimilated food.

It contains besides the nutritive elements of beef, gluten, of wheat and nucleo-albumins, the enzymes of the digestive glands.

As it does not irritate the stomach and leaves no residue to enter the intestinal tract, it is indicated in all those conditions where artificial feeding is necessary and is especially useful in Typhoid Fever, Vomiting of Pregnancy and Diseases of the Digestive System.

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We have received some Five-Grain Antikamnia Tablets, and also tablets of this drug combined with Codeine. Antikamnia, as its name implies, is an analgesic and anodyne and it has gained much favour in the United States both for this and for its antipyretic action. It has been proven not to depress the heart, after the manner of many other coal-tar preparations. Each Antikamnia Tablet contains 5 grs. of the drug (the usual dose), which can be repeated every fifteen or twenty minutes, until three or four doses have been taken. Antikamnia and Codeine Tablets consist of $4\frac{1}{4}$ grs. of Antikamnia and $\frac{1}{4}$ gr. of Codeine and have been especially brought forward for the treatment of pain where spasm or physical causes of irritation exist. Neuroses due to suppressed or irregular menses, particularly during the menopause seem more amenable to this combination than to Antikamnia alone. Antikamnia and Codeine Tablets are especially indicated in membranous affections of the lungs, throat and bronchii. Both tablets merit a trial in neuralgia and spasmodic ailments and as their freedom from injurious action upon the heart and circulation is invariable, they will certainly continue to be received by the profession with favour.—*Edinburgh Medical Journal*.

G. W. Flavell & Bro., of Philadelphia, are manufacturers of a class of articles which have established an enviable reputation. Flavell's elastic trusses, elastic stockings, abdominal supporters, and uterine supporters are well known to the profession, as they are not articles of yesterday, but have been used with benefit by numberless patients and have been before the public for many years. They utilize the principle of elastic support, an assistance, that is, which yields with the movements of the body, but which is always active within proper, safe, and desirable bounds. A truss which is too rigid may cause pain without accomplishing any good result. Such an article, however, as is offered by the firm named can be worn without any discomfort, while it nevertheless keeps the loop of intestine within its natural abode. The same principle applies equally to elastic stockings for the relief of varicose veins.

The abdominal supporters appeal to those of either sex who, from excessive corpulence or other cause, are afflicted with pendulous abdomens.

The uterine supporter is an ingenious piece of light mechanism by which prolapsed or bent organs may be prevented from causing trouble due to the displacements.—*Monthly Cyclopaedia*.

Seemingly Astounding, Yet Usual.

Dr. R. C. Burrow, of Maxon Mill, Ky., gives the following experience:

Miss L. H. had been confined to her bed for three months, suffering with malarial fever. When I was called, I found fever broken, but patient had hardly strength enough to sit up. As she had never menstruated, her mother thought this, in a great measure, the cause of her trouble. After three months' treatment she was again in fair good health, her menses also appearing, but very painful and scanty. I rested treatment for three months more, hoping that good nourishment and nature would re-establish all functional activity. Her suffering, however, grew worse at each menstruation. I then prescribed Ergoapiol [Smith], one capsule four times a day, beginning three days before the expected period. This treatment gave immediate relief and resulted in regular and perfect menstruation. It is now four months since the administration with Ergoapiol [Smith] has been stopped, and she has had no indication of the previous trouble.

Mrs. C., married, had a severe attack of La Grippe last winter. Had not menstruated for the past four months. I prescribed Ergoapiol [Smith], one capsule every three hours. Menses appeared on the third day, and again at the last menstrual period.

Mrs. F., married, consulted me in January. Said she had not menstruated for two months. I suspected pregnancy and declined to treat her. She called again in May and declared positively she was not pregnant. I then prescribed one capsule of Ergoapiol [Smith] before meals and two at bed-time. Menses appeared on the third day.

B. S., single, teacher. Menstruation began at the age of thirteen. Each period, however, was accompanied with the most excruciating pain, compelling her to take to bed for two and three days. This patient, who was large and in good health, said menstruation was free enough and all would be well but for the terrific pain which usually set in after menstruation had started. While attending school last spring, the pains at each period were particularly severe, resulting in convulsions each time. Her physician advised her to discontinue teaching and return home, which she did. During her last menstruation I prescribed Ergoapiol [Smith], with the happy result of no pain or inconvenience whatever, and she is again attending her regular duties.

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Public Care and Treatment of Inebriety.*

By T. D. Crothers, M. D., Supt. Walnut Lodge Hospital, Etc., Hartford, Conn.

There is no phase of the alcoholic problem more startling than the blundering attempts of the State to solve it. Some conception of the efforts to correct the alcoholic evil by law and legislative methods is apparent from the fact that in the year 1901 over 1,200,000 persons were arrested in this country either charged with being intoxicated or for crimes committed in that condition. Statistical studies and observations which can be made in every community show that this method is a total failure through the fact that less than one per cent. of all the persons treated in this way receive any permanent benefit.

It is well known that in every city and town the number of persons who are frequently arrested for drunkenness are increasing and are called repeaters. Such persons appear in the Courts for the same offense over and over again as long as they live, and comprise from seventy to ninety-five per cent. of all persons arrested for intoxication. Thus, one person may appear a dozen times in the course of a year and be fined and imprisoned for the same offense constantly repeated.

Each arrest and imprisonment makes the victim more incurable and his restoration less possible. As an example, in a city in Pennsylvania, one thousand arrests in the year 1900, represented only 280 different persons, some of whom were arrested twelve times.

The cost to the community of this method of cure amounted to over a \$100 for each person, in actual expenses to the tax-payer, to say nothing about the losses to their families, and the pauperism indirectly following. In one town in New York, an estimate of the expense of each inebriate punished during the year amounted to nearly \$200, besides the increased helplessness of the victim and the pauperism and degeneration which fell upon the families.

On the moral side there are in religious, political, and other societies over a million persons united with the Church in constant efforts to check inebriety and alleviate the attendant evils. In this confusional state, all sorts of moral theories are urged to explain and sustain methods of treatment by the pledge, prayer, persecution and punishment of the victims.

The failure of these efforts is apparent in every direction. Every advance of science brings into greater prominence the fact that not only the number of inebriates are increasing, but the losses and degenerations following both to the individuals and the community are more startling and serious. A consciousness of the helplessness of the situation and the magnitude of the evils calls for other and scientific methods for the study and treatment of this disease.

Already the outline facts indicate that inebriety is a disease following a uniform law of causes and effects, marked by beginning, development and decline, the same as other diseases and only amenable by scientific care and treatment. The law which rightly assumes irresponsibility when the man is intoxicated and arrests him, then treats him as a criminal or one who is dispossessed of his senses and can be made sound and rational by force.

As a criminal, he is fined with the idea that the suffering which follows will force him to be temperate and sober in the future. Practically, if he is married, the fines fall most heavily upon his family, making it more difficult for them to live and support themselves, thus increasing the perils of pauperism. The repeated fines and short terms of imprisonment increase the disease and degeneration of the victim, and are actually more dangerous and fatal than the saloons.

Physically, the short or long imprisonment of the inebriate simply removes him from the opportunity to use spirits, without giving mental or physical strength or power to resist in the future. The drinking man is always debilitated, and suffers from impaired brain and nerve force. In prison, the hygienic influences are not good and seldom bring healthy growth to body or mind.

The quality and quantity of food are not adapted to restore the weakened organism, and the mental surroundings and associates lower all self-respect and ambition for the future.

The removal of alcohol and the substitution of depressing mental and sanitary conditions make it more difficult to recover and in most cases leaves the victim feeble and with lower vitality. Thus the first sentence and punishment has often been a switch point by which the victim has been turned to a descending side track farther and farther from the main line of healthy living.

Each year this farce of trying to prevent

* Read at Virginia Medical Society, Newport News, Sept. 24, 1902.

inebriety by fines and imprisonment goes on without a break. Crime is increased, pauperism is encouraged, and the most dangerous sanitary conditions are fostered, and with them the burden of the tax-payers and producers is made heavier. The State through faulty theories and machinery of the law is actually training and graduating classes of incurable inebriates, paupers and insane persons, who are increasing the burdens and perils of life both to the individual and the community.

The superstition of personal freedom and free will which permits this army of inebriates to go on year after year destroying themselves and forming centers of pauperism, which pass on into the next generation, is one of the most serious imaginable blunders of modern times.

Inebriety and its treatment are medical and sanitary topics which cannot be ignored. No community can afford to tolerate the presence of one who persists in destroying his sensory activities and general physical and mental capacity to work harmoniously in the community and observe the rights and interests of others.

Such a man is a peril from the infection and possible injury inflicted upon his own as well as his neighbor's interests. He is paralyzed and poisoned, and is a medical subject, not a criminal or sinner. When he is studied and his disease fully recognized, then the remedies and the means of prevention will be apparent. For a long time science has pointed out a new field for the study of this great evil and indicated lines of treatment which promise a revolution, not only in practically stamping out the drink disease but in clearing away the pauperism and degeneracy which follows.

The first step in the scientific treatment of the inebriate is to consider every moderate or periodic drinker a public nuisance, not only periling his own health, but also the comfort and the sanitary conditions of his surroundings. Like the smallpox case, he must be quarantined, not only for the protection of the community, but for his own sake. He needs protection, direction and control. He needs medical care and surroundings fitted to secure for him healthy conditions of living.

No one should be allowed to destroy themselves by drugs and spirits and so entail upon their descendants degrees of degeneration. All such persons forfeit their personal liberty and become public nuisances and perils to social progress and civilization. Public sentiment should not permit anyone to become an inebriate, or tolerate him after he has reached such a condition. He should be prevented and forced to come under care and treatment as

one dangerous to the safety and welfare of society until he is restored. Every inebriate should have a legal guardian and his personal liberty be restricted as long as he continues to use spirits. Nothing can be more disastrous from a scientific or sanitary point of view than the indifference which permits men and women to continue to their final destruction the use of alcohol and other drugs.

Probably the largest class of inebriates in this country are without means of support other than what they can earn from day to day. When they stop producing they become burdens on their friends or the community. Another class of inebriates have homes and property which sooner or later disappear and they are then precipitated to the pauper or dependent class. For both classes, the State should build workhouse hospitals and industrial homes in the country upon large farms in the most favorable surroundings.

Here physical and mental training, medical care and profitable occupation should be concentrated, and applied to every inebriate. The hospital should be conducted on a military plan, each patient being given some duty and required to exert himself in helping to contribute by his labor and care towards the support of himself and others. Employment of some kind and duties requiring military exactness should be a part of the work.

Each man should be organized into the working force of the hospital and made a producer in some way, and kept in training, not only for the purpose of his self-development but also for increasing the value and usefulness of the Institution. All the conditions of life should be regulated with military exactness. Every source of debility and disease should be removed. Careful nutrition, baths, exercise, mental and physical remedies, and every possible curative agent which can be found to restore the energies of the body should be enforced.

Patients who show a capacity to become more than self-supporting should be placed where any surplus earned could be credited to him and his family. These hospitals should become industrial centers for the production not only of the food required by the inmates, but of products that could be exchanged for other necessities. Patients should be sent to these hospitals on a legal commitment before a local magistrate or judge of the city or county courts. This commitment should be based on the testimony of two physicians, the members of his family, and of the community in which he lives, that the person is an inebriate and uses spirits and drugs constantly or at intervals to excess.

The judge should sentence him to such hospital for periods of from one to three years with the provision that when he exhibits a degree of restoration he may be allowed to go out on parole. On relapsing, he should be returned, and after a reasonable time of experiment, if it was found that he could not live a sober life outside, his commitment should be permanent. These hospitals should take not only the pauper classes but those able to pay, treating them substantially in the same way, combining labor with restraint and military care and also with every condition known to build up both body and mind. The professional man and the laborer should be placed in conditions and surroundings suitable to build up and restore his diseased state in the same or different hospitals, and all be mutually self-supporting. Every town and city should have special industrial homes for inebriates built on the cottage system with ample power of control.

Every inebriate in the community should be regarded as having forfeited his personal liberty and become a public nuisance and an obstacle to civilization and progress. The disease which he suffers from not only effects himself but the community, making it necessary that he should go into a hospital on the same principle that small-pox or other infectious diseases are quarantined. This is simply a law of self-preservation for the strong and healthy.

The money to build these hospitals should come from the license revenue, on the principle that every business should be made to provide for the accidents and expenses which follow from it. Railroad Companies and other corporations are forced to pay damages for the accidents which occur in their business, and this is always conceded to be just, but to-day the money received as license for the sale of liquor is used to support courts and jails where the inebriate by fines and imprisonment is made worse and more incurable.

Thus, literally the business of selling spirits is increased by the efforts of courts and jails which make permanent patrons for saloons of all who are punished. Every man or woman who is arrested for intoxication is henceforth a customer of the saloon, and the very object of the State to diminish inebriety by this means is defeated.

Private enterprise should be encouraged by legislation to provide smaller hospitals for the most fortunate classes who are able to pay for better surroundings and are unwilling to enter public institutions. Here the commitment should be forced also, and the restraint should be military and home like with all the appliances of science that

experience has sanctioned and used to build up and restore the lost health.

Already, there is evidence that a large per cent. of all inebriates can be restored to health and nearly all can be made self-supporting in properly conducted asylums. The seclusion and restraint of the incurable inebriates, which now infect every community, would be felt in the diminished numbers of inmates in every asylum and almshouse and hospital in the land. This would be practically checking the great fountain head of insanity, criminality, and pauperism, and would stamp out much of the evil and misery which now prevails.

To the tax-payer, there would be an immense gain in the diminution of the burden of the criminal and pauper classes. Physicians in every community should strive to form a public sentiment for the enactment of laws recognizing the disease of inebriety, and giving cities and towns power to build hospitals, and raise the license fund to pay for them. Ten per cent. increase of the license fund would build and put in operation a number of Hospitals of this class.

Industrial work-house along economic lines on large farms in the country conducted on military principles where the labor of the inmates may be directed to the support of the Institution will stop the tides of pauperism, criminality, epilepsy and insanity.

Then every inebriate who becomes a burden on his friends and the community should be forced into this industrial community and made to be a producer where now he is a consumer and burden. Long ago, a noted physician wrote, "No man in any community has a right by personal conduct to peril the interests of others." Society gains nothing by tolerating the presence of any one whose liberty is dangerous to them. Human rights gain nothing by allowing any man to be at large for a moment who is destroying himself, his family and neighbors.

What we need to-day are tests and gages of this fitness or unfitness. The remedy which should be applied and which is already indicated in a thousand ways in that we must regard this army of inebriates as diseased and dangerous, and the highest interests of society demand that they should be quarantined and their liberty restricted, not as criminals to serve out short sentences in jail, not as wilful sinners to be cured by fear, suffering and punishment, but as diseased and mental cripples needing guardianship, medical care and the direction and control of others. Like the insane, or cases of infectious and contagious disease, they need isolation and treatment in special surroundings. The time is not far distant

when this vast army of 1,200,000 persons who are punished legally for intoxication and the crime following will disappear, and the inebriate in every community will be forced to go to the hospital before he becomes a criminal and pauper, and this will solve the major part of the great problem. The whole subject must be taken up by physicians, and studied on its physical side from existing conditions. Corporations and capitalists are alarmed and refuse to trust their interests to drinking men. They assert positively that all drinking persons are unsafe and dangerous and should come under special care and restraint, yet the mass of the community are still indifferent and tolerate them.

The treatment of inebriety in industrial hospitals is no experiment or novelty. Its practical character is apparent in many of the Institutions where these classes are received in this country. The Massachusetts Inebriate Hospital, at Foxboro, annually treats from five to six hundred patients of this class. Nearly all of these persons have been and would be repeaters in the lower courts of the State, spending their time in jails, station houses or saloons. Under confinement at this hospital, they remain from one to five years and are thus forced to temperate living. It would be difficult to estimate in figures the relief and gain to both the families and communities by the forced restraint of these persons.

The Elmira reformatory is another pioneer hospital where the work house principle of treating inebriates and criminals is practically demonstrated. Who can estimate the relief and gain to the community which follows directly from the housing of these classes, and yet this will be a reality and practical necessity in the near future.

Recently, the great wave of empericism, which has swept over the land claiming to cure inebriety by some secret remedies, has clearly pointed out possibilities of cure, not in the number of persons restored, but from the fact that any were benefited by such blundering efforts. For years the treatment of inebriates in private homes, asylums, and even home treatment by the family physician, based on theories as diverse as the men who urged them, and by methods and appliances of the most imperfect character, have been followed by a measure of success which is most encouraging for the future.

These and other efforts are very hopeful indications of what can be done from a more exact knowledge of the disease of inebriety and its progress. The medical profession have hardly yet taken up this topic. Their efforts so far have been mostly confined to the relief of the acute symptoms

without thought of the possibility of prevention and cure. In the meantime, every advance of science brings into greater prominence the influence of alcohol as a very large factor in the causation of acute and chronic diseases.

Public sentiment recognizing in a dim way the failure of the legal and moral efforts turns naturally to the medical profession for means of more successful treatment. There is no theory or sentiment in the facts of disease, and the burdens and losses which follow from the inebriety of the victim. It is a condition with consequences that must be recognized. Indifferent and toleration or childish efforts utterly inadequate can make no impression. Each advance of science brings out the fact of disease more sharply, and the need of exact means and measures to reach it. In this study the fact I wish to emphasize is, that inebriety is one of the most serious diseases of modern times and one that is most curable in special surroundings, and by special means.

One of these means to control and cure the incurable classes is industrial hospitals situated in the country, built from the licensed fund and supported by its inmates. Laws must be enacted to organize and conduct such Institutions. This disease must be reached and controlled, and the medical profession should lead in a new crusade for the exact care and treatment of the inebriate. Public sentiment will sustain efforts of this kind and the only objectors will be the inebriates and the moderate drinker and the liquor dealers.

We have come to a point when a radical revolution is demanded in our current theories and methods of regarding the inebriate. The success at Havana in driving out yellow fever is only an object lesson of a larger and more complete preventive work in the housing of the inebriate and his medical treatment. The high rate of the mortality, pauperism, criminality and a vast host of diseases will practically disappear when the inebriate is treated and cured in such hospitals.

Some Phases of Modern Medicine.*

By R. L. Payne, M. D., Ex-Pres. N. C. Medical Society, Surgeon St. Vincent's Hospital, Norfolk, Va.

Mr. President, Fellows of the Virginia Medical Society—Ladies and Gentlemen:

As I stand in the presence of this distinguished audience, I feel myself the recipient of the highest honor, in that I have been chosen to address you, and no one

* Address to the Public and Profession delivered before Medical Society of Virginia, Newport News, Va., Sept. 23rd, 1902.

save myself can know, how I long that, for this one time at least, my lips might be touched with the fire of eloquence divine. I can only hope, however, to speak to you in the language of a plodding everyday workman who knows more of the pill-box and scalpel than of the arts of the logician or the flowers of rhetoric.

My theme is, "Some Phases of Modern Medicine." To all of you the subject must be an interesting one. The ladies are all born doctors and, no matter how difficult the case, are always ready to make a diagnosis, and prescribe a remedy, while their husbands and friends are the willing victims of their sometimes doubtful ministrations.

The rest of my audience is made up of men who give their time, their comfort, aye, their very lives to the study and development of modern medicine.

The history of medicine is almost the history of the human race, for coincident with the fall of man sickness and suffering came upon earth, and man began to seek remedy for human ill.

For many centuries, however, the best efforts were but gropings in the dark, and medical practice was a strange mixture of facts, fancies and superstitions. The incantations of the sorcerer were mingled with more rational therapeutic measures, mysticism and charlatan walked hand in hand and the sum of medical knowledge was made up of empirical facts bearing little relation to one another. The evolution of our art has been hampered at every step by the superstition, the ignorance and the absolute intolerance of the people. Its votaries have often been the objects of suspicion, of persecution and always, even down to the present day, of scant appreciation, so that it is wonderful how through all ages the doctor has gone on working, observing, investigating, devoting life and energy, sacrificing all of life's pleasures, laying his all upon the shrine of human need and asking no higher boon than a life snatched from the hands of death. Strange that such high purpose and such holy aim should oftentimes have suffered its most serious antagonism at the hands of the Church.

For several centuries in the early years the Church forbade the study of Anatomy, declaring it sacrilege to dissect a body "made in the image of God," and even late in the Nineteenth Century the Scottish Clergy reviled the great and good Simpson for administering chloroform in the awful pains of maternity, basing their opposition on the primeval curse, "In sorrow shalt thou bring forth children."

Slowly prejudice began to yield to the benefactions of our noble art, slowly out of

chaos light began to dawn, from the correlation of isolated facts fixed principles began to be deduced, from careful study of the human body, both living and dead, its functions and powers came to be understood from the study of diseased conditions, both in the living body and in the dead-house, we have learned more and more of the ultimate causes of disease and its termination death, from the study of cause and effect on living animals, by means of vivisection, we have been able to unravel many mysteries, and to-day medicine is rapidly approaching the level of an exact science and is showing a beneficence of purpose and result greater than that of all other human agencies combined. And yet, modern medicine is hindered, as of old, by the lack of appreciation on the part of many people. In part, this is due to unreasoning prejudice, but in greater part, is it due to lack of intelligent understanding of the high aims of our profession and the necessary effort which must be made for its development. Again, the advancement of medical science is constantly hindered by lack of intelligent discrimination and the ease with which people are gulled by all sorts of uneducated and misguided men—charlatans,—who under the guise of Christian Science, Osteopathy, and such like cults, prey upon the diseased and suffering in our communities unhindered by the law which should protect the ignorant and helpless. Witness the effort made at the meeting of the last Legislature of the State of Virginia to have a law enacted forcing the so-called doctors of Osteopathy to come before a Board of Medical Examiners and show at least some rudimentary knowledge of the human body and the laws of health and disease before being permitted to prescribe for the sick. Such a law has been for many years binding upon the regular medical profession and upon homeopathic physicians, neither of whom are permitted to apply for examination until they have had many years of general and special study, therefore there is nothing unreasonable in requiring the same standard from all who deal seriously with human life.

What was the result? In the Senate Committee on General Laws this Bill was killed by a vote of 7 to 1. Shame on this Committee! In shame let its name go down to posterity and let the epitaph of each man be "He voted to make Virginia the dumping ground for the quackery of the universe."

Again witness the effort made so recently in the Congress of the United States to have passed an anti-vivisection Act, which would at once end, or prevent, by unwise and injurious restrictions, this most important method of investigating the most

difficult of all questions in the pathology and treatment of disease. When we recall all that has been accomplished for humanity by experimental work upon animals—practically all that we know of the fundamental facts of physiology; all that we know of intestinal surgery; much that we know and execute successfully in brain and in bone surgery and well-nigh all that we know absolutely of the physiological action of remedies and of the ultimate causes of disease as shown by bacteriological investigation and control experiments, we shudder to think that the ignorant and maudlin sentiment of a few people should seek to curtail such important sources of information.

Shall I adduce other evidence in proof of my position? Think, then, of the widespread dissemination of small pox throughout our country to-day, and remember that in persons properly vaccinated all are immune except about 7%. Think of the great loss of life and of treasure, in part expended in efforts to cope with this dread malady and in part lost by disturbed business conditions incident to the various epidemics, and remember that such a state of affairs is entirely due to the ignorance or indifference of the people to the protecting power of vaccination.

"The Review," a Church paper published in St. Louis, in a recent issue, goes out of its way to indulge in a rabid anti-vaccination crusade, even condemning the Catholic Archbishop who advocated vaccination, and speaking of doctors who advise vaccination as "humbugs," "criminals," guilty of "fiendish inhumanity," etc., etc. These expressions are but a revival of the spirit which pervaded the ages of barbarism and one would have expected such opposition to have disappeared in the blaze of intelligence which has ushered in the Twentieth Century.

Then there are many difficulties in the way of the advancement of medicine which are inherent to the very mystery of life itself. What is life? What is death? The beginning and end of function in definite organs and tissues, if you will, but the mystery remains. Gradually in the light of modern methods of investigation, however, we are peering deeper and deeper into the mystery of hidden things. Someone has well said "This is an age of doubt, its coat of arms a question mark, its motto 'Query'". This is peculiarly true of modern medicine. Antisepsis and asepsis have made possible hundreds of life saving operations, until now there is no organ or tissue in the body which the surgeon holds too sacred to pay tribute to his skill in added years of human life. Bacteriology,

vivi-section, serum therapy, organo-therapy, cellular pathology, are daily bringing new light and making us more and more able to cope with disease. The mortality in every disease has been slowly but steadily reduced until the average of human life, which in the 16th Century was as low as 20 years, is now more than 40 years, and we have every reason to believe will be steadily increased under knowledge, each day growing more and more definite and method, each day growing more and more perfect. But still, the cry is for more light. What we need is to get rid of the maudlin sentiment as regards vivisection and post mortem investigation.

Only think of the great good to humanity that has resulted from the antitoxin treatment of diphtheria. That terrible scourge, once the "pestilence which walketh in darkness and the destruction which wasteth at noonday," has had its mortality so reduced that we now have little fear of it, and yet these results could never have been reached without the study of cause and effect on the lower animals. Behring and Kitasato demonstrated by repeated experiments that an animal inoculated with the toxins of diphtheria till no reaction followed, would itself become immune to the disease and further, that if the blood of such an animal be injected into another animal affected with the disease a cure would result. From these experiments has developed the antitoxin treatment of diphtheria which promises to blot out this one time terrible malady from the face of the earth. With such results can anyone question the propriety of such studies? We must experiment or stand still. We must try new methods, give new drugs, perform new operations or learn to do old ones in a better way. These experiments must be tried on living bodies and the question is shall the subjects be men or animals. Christison well-nigh lost his life trying the effect of Calabar bean on himself and poor Toynbee, so testing prussic acid, was found dead in his laboratory. Little more than a year ago, during the investigation of the means of propagation of yellow fever Lazear, a young army surgeon volunteered to test the mosquito theory on his own person, and permitting himself to be bitten by a mosquito which had been feeding on the blood of a man sick with yellow fever, he quickly sickened with the dread malady and with his life paid the penalty of his zeal for science. Such men are noble martyrs in the cause of human weal and in the innermost sanctuaries of our hearts we erect monuments to their memories, but it is none the less true that we must not experiment with human life or health and no man

has a right to even subject his own life to the uncertainties of scientific investigation. What then shall we do? Certainly it is better that a few animals should die than thousands of human beings may be saved. But we cannot stop here. What we need is more opportunity for investigation along many lines. Let large laboratories be endowed where disease may be investigated by every means at our command. Make it possible for these laboratories to be filled with a corps of trained workers, who shall be paid sufficient salaries to permit their devoting every energy to the task in hand, unhindered by the care and care attendant on the struggle for daily bread. Medical men, as far as possible, are already working along these lines, but the work is hampered for lack of means and most of the investigators are constantly turned aside from labors, pregnant with great possibilities for the relief of sick and suffering humanity, by the grim necessities of existence.

Let the philanthropist take hold of these matters. Already, Mr. Rockefeller has endowed a large Laboratory in New York City, which will make such studies possible and we have reason to hope that Mr. Carnegie's munificent gift to education may find one of its objects in this direction, but there still remains the need of a great awakening to the needs and possibilities in this field.

Very hopeful signs in this connection are that New York State has endowed a Laboratory for the investigation of cancer and very recently, in the early summer of this year, Congress enacted a law constituting the Marine Hospital Service a Department of Public health and making it possible that this department of our government may add much to the efficient work it has already accomplished in a sort of voluntary way. The only question is, will this Department of State be given men and means to prosecute its work? We have long had an efficient Department of Agriculture and a Bureau of Animal Industry. Only a little time ago Congress on three different occasions voted an appropriation of \$100,000 for the printing and distribution of a rather indifferent work on diseases of the horse. Active legislation has been enacted to protect cattle from ticks and so we can but wonder that the great government of the United States has moved so slowly and so poorly in the matter of protecting her people from disease. Let each one of us feel it his personal duty to bring these subjects home to the attention of our law makers.

After all, however, I fear we shall have still to look almost entirely to the voluntary

labors of medical men for the upbuilding of modern medicine, and in the future our greatest triumphs and greatest hopes lie not so much in the cure of disease as in preventive medicine. Along these lines are our best efforts being made. Here again, our greatest achievements and best hopes lie in laboratory investigation where the patient worker with microscope, culture medium and inoculation test has worked out many of our most difficult problems and opened the way for a great harvest of results which will be quickly reaped by succeeding toilers. In the laboratory Eberth discovered the bacillus of typhoid fever; Klebs and Loeffler the microbe of diphtheria; Koch the bacillus of tuberculosis and the germ of the dread Asiatic cholera, and Haffkine worked out the principles of his cholera prophylaxis which has so materially reduced the death rate of the English army in India. Many other germs have been discovered and thus preventive medicine, armed with definite knowledge of the cause of such terrible diseases, is waging successfully a war of extermination. The investigations of Reed and others have shown that it is possible to stamp out yellow fever in its very hotbed. The lately demonstrated truth that malaria is spread by a certain variety of mosquito leads us to believe that the control of malaria is almost within our hands and, more and more, evidence is accumulating each day encouraging the hope that the dread malady tuberculosis, so long regarded as the inevitable child of heredity, may yet be banished forever. And so the good work goes on from triumph to triumph. In spite of all opposition, in the face of every difficulty, over-riding every prejudice, scorning neglect and scant appreciation, to-day medicine is attaining such perfection of method and such glory of results as makes our hearts swell almost to bursting that we are named her sons and votaries.

Incidentally, it may not be out of place in this day, when we hear so much of the intellectual superiority of the North over the South to refer to what Southern physicians have accomplished for modern medicine. I need only point you to the discovery of Crawford Long, of Georgia, who gave to the surgeon that most blessed of all boons, Anæsthesia, and lulled to sleep the agony of the world. I need only to refer to that grand old man, McDowell, of Kentucky, who devised and executed the first ovariectomy and thus took the initial step and blazed the way for all the grand achievements of abdominal surgery, adding countless millions to the sum total of human life. I need only hold up to your gaze the brilliant work conceived and executed in a

little country town by the illustrious Sims; I need only recall the names of Emmett, Thomas, Sayre, Kinloch, Chisholm, Wyeth, our own Manson and McGuire and a host of other names bright in the galaxy of American Medicine to show that the South has borne a lion's share in all the labors and triumphs of modern medicine. To you, worthy sons of worthy sires, my co-workers in this great and glorious battle with disease and death, I bid you God-speed. You cannot content yourselves except you be in the thickest of the fray. It must not be said of us that we have been content to simply enjoy the work that others have accomplished or that

"Thoughts great hearts once broke for,
We breathe cheaply in the common air."

No, each of us has some duty to perform and to meet this duty nobly must

"Be up and doing
With a heart for any fate—
Still achieving, still pursuing—
Learn to labor and to wait."

Dependent Drainage in Acute Extensive Intra-Pelvic and Intra-Peritoneal Infection in men by Incising the Perineum Separating the Rectum from the Prostate and Bladder, and Puncture of the Recto-Vesical Pouch of the Peritoneum.*

By Hugh M. Taylor, M. D., Richmond, Va., Professor of Practice of Surgery and Clinical Surgery, University College of Medicine, Richmond, Va., Surgeon to Virginia Hospital, etc.

How best to secure dependent drainage in extensive intra-peritoneal and intra-pelvic infections in the male is an important, but unsolved surgical problem. The experienced abdominal surgeon is keenly alive to the importance of this subject. Path-finders in surgery in the pre-aseptic era, warned us that along the line of dependent drainage, there was hope.

About twenty-five years ago, Dr. Marion Sims noted the fact that in deaths from septic peritonitis there is found an accumulation of bloody serum in the peritoneal sac and he attributed the death to the absorption of this bloody serum. Dr. Hunter McGuire appreciated the fact (prior to the aseptic era in surgery) that if dependent drainage could be secured, the deaths from septic peritonitis would be lessened. In a paper read by him before the Richmond meeting of the American Medical Association on "Penetrating wounds of the Belly" he impressed the idea that bullet wounds of

the pelvis are less dangerous than similar wounds of the abdomen, owing to dependent drainage in pelvic wounds. In that paper he advocated early operative intervention and dependent drainage by opening the posterior cul de sac in women and the recto vesical pouch in men through the rectum.

An early operative intervention and an improved aseptic technique are the crowning features of modern surgery. But in spite of all that has been accomplished through delayed intervention, the number of cases calling for dependent drainage is distressingly large. Our ability to diagnose abdominal and pelvic lesions in their incipency must markedly improve, (and notably is this true of the general practitioner, who is called upon to make the diagnosis in the incipency of the trouble) before we will cease to meet with the well called eleventh hour cases, with great pus collections or acute general infection of the peritoneal sac. In the late operation and extensive intra-peritoneal infection met with in connection with gastric and duodenal perforations, in perforations of the gall bladder, in typhoid perforations, in abdominal visceral traumas including bullet wounds and appendicial infection, we will find most frequently the need for dependent drainage.

All will concede that when and how to drain in widespread intra-peritoneal infection, local and general, is a much vexed question. Many surgical masters advise by one technique or another "when in doubt drain," an equal number of intellectual giants urge "when in doubt not to drain," the uninitiated as well as many who do not belong to that class, lament this wide difference of convictions.

In women dependent drainage through Douglas' cul de sac of course is a well recognized life saving resource. In men with extensive infection it is an open question if drainage does more harm than good. Men of wide experience urge the value of gauze or tubular drainage or both, through multiple incisions and through lateral and posterior stab punctures. Just as good men contend that the peritoneum unhampered by tubes, gauze, etc., will be equal to the task of saving more lives. All will concede that the eleventh hour cases with extensive infection are practically hopeless, this is the recorded experience of many whose skill cannot be questioned.

A practice which entails a mortality of from fifty to one hundred per cent. should not, we think, have a firm hold upon professional confidence. I am led to hope that the plan I shall outline may help to solve the important problem of how to secure de-

*Read before the Virginia Medical Society Sept. 29, 1902.

pendent drainage of the infected peritoneal cavity in men. The plan proposed is not intended to supplant to methods now in vogue, but only supplement them.

It has been proposed by some one to secure dependent drainage by the periscrotal route; to what extent this has been done, I do not know. I only know of it as a suggestion. *I have seen reported an instance in which the operator opened a pelvic abscess incident to appendicitis by deeply incising the ischio natal fossa.

A brief resume of the peritoneal pouch in the male pelvis may make clearer the method I wish to advocate. If the plan proposed has been urged before, I am only sorry to say it has escaped my notice, for to my mind it possesses advantages so palpable that it should not be neglected until thoroughly tested.

(1st) "It must be remembered that the peritoneum descends upon the anterior surface of the rectum to within about an inch of the prostate, but not quite so far upon the sides or behind; its average distance from the anus is from 2 to $2\frac{1}{2}$ inches in front, and five inches behind." (*Stimson's Operative Surgery*, page 449.)

(2nd.) "The rectum is loosely attached by loose connective tissue to the lower half of the sacrum and the coccyx, while in front it is more closely attached to the back of the prostate and bladder by firmer connective tissue, the prostatico-peritoneal aponeurosis, connected with the recto-vesical fascia. This aponeurosis, however, allows the separation of the rectum from the prostate and bladder and if traced upward is found to be attached to the bottom of the recto-vesical pouch of the peritoneum." (*Applied Surgical Anatomy*. Woolsey, page 359.)

(3rd.) "The anterior wall of the rectum can be separated by blunt dissection from the prostate gland and reflected toward the sacrum." (*Saunders's Medical Hand Atlas*, Operative Surgery. Page 376. Zuckerkandl.)

Recalling the fact that the recto-vesical pouch is the most dependent point of the peritoneal sac, that it extends to within an inch of the prostate and is within from $2\frac{1}{2}$ to 3 inches of the anus and the further fact that the anterior rectal wall is connected by loose cellular tissue (prolongation of the subperitoneal connective tissue) to the prostate and floor of the bladder, it will surprise me very much if some one has not urged this as the best route by means of which to secure dependent drainage of the peritoneal sac in men.

A few months ago a little negro boy was referred to my service at the Virginia Hospital from one of the adjacent counties. He had all the evidences of a large pus collection in the right iliac region, a sequence of an acute appendicitis of ten days or two weeks duration. In my absence the abdomen was opened and as was anticipated there was found a great pus cavity extending well into the pelvis. The precarious condition of the child contra-indicated a prolonged operation. As far as practicable the pus was evacuated, the wound left open and free drainage essayed with gauze and a large glass drainage tube passed well into the pelvis. On my return next day the child was practically moribund, and this in spite of free drainage by the gauze and persistent emptying of the glass tube by suction syringe. A rectal examination disclosed a bulging mass which brought the anterior rectal wall in contact with the posterior, a trocar was passed per rectum, into the mass and a quart or more of pus was evacuated. In a few hours the child died. I then put him across the bed in the lithotomy position, made a curved incision in front of the rectum, cut through skin and perineal fascia and muscles, and then with the forefinger of my left hand in the rectum as a guide, with the forefinger of my right hand, I separated the rectum from the urethra and vesical floor and with ease carried my finger into the peritoneal cavity. I found that I could separate the rectal wall and push it backward just as easily as you can separate the bladder from the anterior surface of the uterus.

A few weeks ago a negro man was admitted to the Virginia Hospital with a large mass in the right iliac region. The trouble had continued for ten days or more and was clearly appendicial in origin. An incision disclosed an abscess cavity adherent to the anterior abdominal wall. A pint or more of pus was evacuated. The peritoneal cavity was not opened. The abscess cavity was gently irrigated, the wound left open and a drainage tube and gauze introduced. The following day evidence of general infection were marked. On opening the abdomen, the pelvic cavity was found filled to the brim with pus and suppurative peritonitis of the green type was advanced. The pus was evacuated, the intestines removed from the abdomen and subjected to prolonged irrigation. The intestines were then replaced, the patient put in the lithotomy position, a gloved left index finger inserted into the rectum, the perineal incision made and the rectum separated by simply pushing the finger in the perineal wound up to the recto-vesical pouch blunt dissection with finger. The

* Dr. Francis I. Kirby in a paper read before the North Carolina Medical Society, June 1902.

finger in the rectum was now removed and ungloved, the left hand was introduced into the pelvis through the abdominal incision, the cul de sac depressed and punctured with sharp pointed scissors from below. This whole procedure can be accomplished in five minutes and prolongs the operation only a few minutes. A large glass drainage tube was easily passed into the recto-vesical pouch through the peritoneal incision. A strong silk ligature was attached to the end of the tube in the cavity and brought out of the abdominal incision. Over this ligature another tube was passed and the ends of the two tubes were brought in contact in the pelvis. The end of the silk was clamped with a pair of forceps. By means of an irrigator the pelvis could be forcibly flushed out through these tubes. The head of the bed was elevated. Fowlers.

An unfortunate mistake was made by someone in changing the abdominal wound dressing. The forceps clamping the silk ligature which held the tube in the perineal incision were removed and the next morning the tube was found out. I have no idea that this accident had anything to do with the death of this patient which occurred in thirty-six hours. It was a forlorn fight from the first. The tube was promptly replaced and it was found that drainage continued to come through the perineal section even while the tube was out.

My failure to save this life, in fact, should I fail in several such attempts, I would not lose my confidence in a treatment which is easy to secure and which has sound surgical principles to commend it. My experience limited as it is prompts the conviction that when dependent pelvic and abdominal drainage is needed, it has decided advantages over any plan with which I am familiar. One has to try it to realize how easy it is to accomplish the dissection. With the peritoneal cavity opened and assisted by one hand in the pelvis above, this procedure is as easy to accomplish as opening the Douglas cul de sac through the vagina. With the recto-vesical pouch distended and depressed by intra-pelvic effusion, pushing the pouch down against the rectum, I believe drainage can be effected without opening the abdomen above and in some cases may tide the patient over a crisis just as is done when we incise and drain per vaginam in pelvic infections. If the recto-vesical pouch is not distended, I doubt if it will be an easy matter to puncture it—its loose attachment will probably result in the peritoneum being pushed inward by the finger or scissors.

I have not thought it necessary to take this precaution but if greater protection to the urethra is thought essential, it can be

secured by passing a sound into the bladder. A more probable accident, we think, would be a rupture of the rectal wall but this would be very improbable because of the loose attachment and the added safeguard of a finger as a guide in the rectum.

My colleague, Dr. J. W. Henson, has kindly made the dissection called for in this method on the cadaver and with myself is equally surprised at the ease with which this simple and effective drain route can be secured. No added shock should attend this dissection. There are no blood vessels to sever and the seminal vesicles are not injured by the blunt dissection to secure the same result by dissecting through the escheo-rectal route. The blunt dissection cannot be accomplished as easily and the path is rich in its blood supply.

Report of Case of Septicaemia, as I Felt Myself.*

By J. C. Newman, M. D., Helenwood, Tenn.

Perhaps some of the profession will think that it would have "been better," or "looked nicer," or "more professional," if some one of the five physicians who attended me, would have reported this case. That might be so, but one thing I do know, no one can describe my feelings more thoroughly than I can myself.

I have never read a case that I can refer to as a parallel in the sixteen years of my practice. I have treated many cases, both simple and complicated Septicaemia, and in my description of my own case, I will ask my fellow practitioners to be as light in their criticism as possible.

During the season 1901, there was quite an epidemic of Scarlatina of a malignant form in this country; and I had some twenty cases in charge. On the 12th of August, 1901, I got a scratch on the back of my hand, but paid no attention to it as usual. On the 14th I was called to see a new case, where the eruption below both knees had coalesced, forming a solid shield to the ankles. I forgot all about my scratched hand, and in the course of the examination it came in contact with the inflamed surface. The patient lived some two miles from my office, and before I got back home my hand was paining me very bad. Next morning it was swollen to twice the normal size. With a thorough cleaning with Peroxide, and a few applications of Antiphlogistine, the inflammation soon subsided, and it quickly healed up and I thought no more about it. On the 27th, same month, I made a trip of some 16 miles horse-back;

*Read before the Tri-State Medical Society, Oct. 9, 1902, Birmingham, Ala.

and before I got back I began to have severe throbbing pains on left side of rectum. The next day the pain was more intense. I retired about 8 p. m., and about 10 p. m., I was awoken with the most intense throbbing pain on the left side of rectum I think I ever experienced. I endured it till after 12 o'clock, when I got a hypodermic injection of morphine. This gave me some relief for 6 or 8 hours. I sent for Dr. J. E. George, of Rockwood, Tennessee, who arrived the next morning, but I knew nothing of his coming and going for the next ten days. I give his report for the first ten days. "Temperature ranged from 101 to 104; marked peritonitis; profuse discharge of pus from an opening one-half an inch left of rectum. He made another incision one-half an inch in front of rectum left of perineum; on the 11th day the delirium subsided." The free discharge of pus continued, and required dressing four to six times a day. Temperature continued, but ranged from 99 to 100. By the 18th of September there was complete induration of all the muscles of abdomen between the umbilicus and the pubic bone, which were tender and painful all the time. Later on we discovered that by pressing on the muscles of abdomen the discharge of pus was increased; and further observation disclosed the fact that a sinus or channel had been formed through the fascia, and passed into the left groin midway between the crest of the ilium and pubic bone, and discharging as above described. This discharge of pus from near the rectum continued for nine weeks and four days. I insisted that there was a pus sack between the muscles, and repeatedly asked the doctors to make an incision to the left of the median line and above McBurnie's spot, and wash it out. They all argued me down that there was no pus there. As the induration subsided a soft gelatinous mass appeared, and finally "headed up" on the median line between the umbilicus and pubic bone; and Saturday morning, after sixty-eight days "bursting," discharging one and one-half pint of the most offensive pus I ever smelled. No sooner than this opening appeared than the two openings at the rectum closed and ceased to exist. This abdominal opening discharged pus free for four days, when it closed. There was no more discharge for about ten days, when at the same place there appeared a "pimple formation." I opened this myself, and there was another profuse discharge for 3 days, after which a sudden stop. About eight days after this I felt a fluctuation in the left iliac region. To raise up or sudden turn in the bed, it felt like a soft lump fall to the side on which I turned. Fearing there might be a

rupture of the sack into the abdominal cavity, and no physician near, I got on the train Nov. 21st, 1901, and went to the University Hospital, at Louisville, Kentucky, and there I was subjected to a rigid examination, including a microscopical examination of blood, for pus leucocytes; also urinalysis; and was informed that neither showed any evidence of pus. I insisted on an operation, for I knew that pus did exist, for I could feel it. On Nov. 25th, 1901, the operation was made without the use of an anæsthetic. The incision was made on the median line midway between the umbilicus and pubic bone. A thick yellowish, muco-purulent discharge was all. But with the first dressing there was considerable pus. I left the Hospital on the 6th of December. The discharge continued for about eight weeks. There is yet more or less soreness of all these muscles, and when I ride much now, they are quite tender and painful. On the 15th and 16th of this month, 1902, there was a discharge of pus at the old opening, of perhaps two drams. The examination of the blood showed a deficiency of the red corpuscles.

The treatment before going to the Hospital was principally Iron, Quinine and Strichnia, the Hypophosphites and Saline cathartics. I am sorry to say the treatment they gave me at the Hospital, I have forgotten. Excepting of about ten days, my appetite was extra good, and I ate most anything I wanted to.

When I was taken sick I weighed 227 pounds; when I went to Louisville, weighed 150 pounds. I was unable to attend any business until the latter part of last March.

After the rupture on the 68th day, my temperature dropped to 95-4-5, and it was long afterwards before it ever "crawled" up to normal again. Even to this day, over a year since the trouble began, it is oftener below normal than otherwise. Two or three days regular riding will lay me up for five or six days.

The abdominal muscles have never become sound, and I am beginning to think never will again.

In plain and unvarnished terms, I have tried to describe my infirmities, and what I have left out, I respectfully refer the reader to Dr. J. E. George, of Rockwood, Tennessee, and J. I. Foster, of Huntsville, Tennessee, for further details, as they were with me oftener, almost constantly, than anyone else.

What was the cause of this trouble settling in the muscles of the lower abdomen? Why does my temperature continue subnormal? I am thirty-four years old, and never had any previous sickness, except a little case of fever when I was about nine

years old. My present weight is about 176 pounds.

I would appreciate any suggestions that may be offered.

A Plea for Mothers and Their Offspring.*

By T. S. Hening, M. D., Winterpoek, Va.

Mr. President and Gentlemen of the Medical Society of Virginia:

My object in choosing this subject is simply from a humane standpoint and not for the amount of scientific knowledge that is in it. I have always wondered why this society has never done something along this line. While it has successfully done so much in many ways for suffering humanity, this has passed unnoticed. There is not a member of this society, whom I dare say has not come in contact with cases similar to the ones I intend bringing before you. I'll not take up much of your time, and think the best way to bring this before the society will be to report some of the cases I have seen in my short career as a practitioner. Out of eight cases of the grossest neglect, I'll report five, two of the mother and three of the offspring.

Case 1. The mother. Mrs. A., white, age 23. I had just located in the country after leaving the Hospital full of aseptic training. Was called to Mrs. A., some eight miles distant and found on reaching there the black, illiterate and impudent Granny. She lived in sight. The messenger who had been dispatched for me went by and sent her on, so when I arrived, the mother of Mrs. A. met me and said "Doctor everything is O. K., the child is coming right." How do you know that? I ask. "Why the Granny has just made the fourth examination." Did she wash her hand? "No, but rubbed plenty of grease on them." I went in and told the old Granny that she should not make another examination, that Mrs. A. would certainly have child-bed fever. Whereupon she grew furious and wanted me to understand that she had delivered babies before I was born. I said maybe so, but you will not deliver this one, you have already infected her, and sure enough, she had a furious case of puerperal fever which came near ending fatally.

Case 2. The offspring. Had the proverbial Granny. Cord tied improperly or not at all, simply twisted. The father saw the child gasping for breath and remarked to the Granny, "Something is wrong with the boy." She said O, no, and laughed at him, told him he was new in the business.

So his firstborn, a strong robust boy's life's blood was slowly, but surely flowing away. Imagine the sorrow of those parents and especially that mother who, had suffered so much to bring that child into the world, to find that boy one half-hour later still in death, and upon further investigation find the child's clothes saturated with blood. The old illiterate Granny was equal to the occasion and accused the father of going there and turning the child on the wrong side. Shall we allow this to continue in our profession? One of the noblest of all professions?

Case 3. The mother. Mrs. M., age 26. white, first birth. Had trusted her life to one of those black fools who's charges range from one to five dollars. The child was born O. K., yes, then that direst of all complications faced this old Granny. Said the young and anxious husband, "She is flooding." "No," said the Granny "that has to come away." "I feel so funny," says the mother "everything grows so black, what must I do?" The old woman had reached the end of her row, so said, get the Doctor at once. The Doctor lived three miles, found him at home, but when he got there she was too far gone, gasping her last. Just think of it, that young life snipped out. Why? because she did not have some one with her who knew what to do. The result would have been different had the Doctor been there when the child was born.

Case 4. The child. The same old \$1 Granny officiating. The husband sent for me against the wishes of Granny after birth of child, not being satisfied with the treatment of the child and to know if the mother was all right. I found a fine child cold in death, I said to the Granny "Why did this child die?" "I don't know Doctor she just kept on gasping and growing blacker until she just took and died."

Who among you present could not have saved that poor infant? I said to the old Granny, for fun, "Why didn't you use artificial respiration?" "Use what Doctor? I never learned that." I said "No, I think not or anything else."

Case 5. The offspring. The same old midwife. Infant born of mother with gonorrhœa, both eyes infected. Called me in when the child was about 12 days old. I said, who has been practicing on the child? The mother told me that the old Granny had said she would cure it in nine days with breast milk.

Yes, she cured it, alas, it was too late. What have they now? A blind invalid, would that have been the result if they had had a Doctor? I say never! Would we allow a graduate of any medical school of

*Read before the recent meeting of the Virginia Medical Society, Newport News, Va.

Virginia to practice midwifery and charge a fee (even though it be \$1) unless he held a Diploma and a certificate from our Medical Examining Board, I say nay, still we allow these incapable fools to do it.

In conclusion I appeal to every member of the society in the name of God and humanity to stop this grossest of all ignorance, which is being practiced in the noblest of all professions of which we have the honor of being members.

Remarks Upon Some Indications for Wearing Glasses.*

By John P. Davidson, M. D., Professor of Diseases of Eye and Ear, Medical College of Virginia, Richmond, Va.

Having been frequently impressed by the idea which seems to be so generally prevalent that glasses are worn for the single purpose of improving vision, I am prompted to suggest and emphasize some points upon a class of cases which the ophthalmologist considers even more important, if possible, than those who require better vision. I refer to that class which has good vision as a rule, but, owing to imperfections of nature, manifests the greatest variation of nervous symptoms. To say that 75% of all habitual or chronic headaches are either directly traceable to or influenced by eye-strain is not an extravagant statement since it is conclusively proven by clinical experience.

How very often we hear the remark, "If you send a patient to an eye-doctor the result is that glasses are always prescribed." Now this is a charge which we must in a great measure admit, and, we have no apologies to offer for we believe that if we do our work accurately we will lessen the sale of the coal tar products and many headache compounds; and when our work is thus accomplished our friends, the general practitioners, are greatly aided in the treatment of their cases of functional nervous disorders, neuralgias, indigestion and even gout, in some cases.

Owing to the multiplicity, the variation and the irregularity of the symptoms manifested by the disordered or abnormal functional action of the eyes, it may be interesting to mention in a simple and brief manner, with the avoidance of technical terms as far as possible, some of the causes or reasons why such a train of symptoms is produced.

In a word, it may be stated that all of the functional irregularities, inconvenience

and torments referable to the eyes may be traced to two principal causes, viz.:

1st. To the variation in the size and shape of the eye-ball, and

2nd. To the lack of perfect coordinating action of the extra-ocular muscles.

Considering first the size and shape of the globe, would it be reasonable to expect nature to be any more exact in the construction of eyes than it is with regard to other organs, such as the liver or kidneys or even the physical frame as a whole? Nature is not controlled by such minute mathematical accuracies as one or two millimetres in the length of an eye or the fraction of a millimetre in the radii of curvature of the refractive surfaces. We must accept, therefore, more or less variation from an approximated normal standard in nearly all eyes.

Now then, realizing the fact that the lens must focus rays of light upon the retina in order that images be distinctly seen and properly perceived we can readily understand that when the eye-ball is shortened in its antero-posterior diameter, an increased strength of lens is required to bring the rays of light to a focus more quickly. The demand for this increased work, so to speak, on the part of the lens is really at the expense of the intrinsic muscles, i. e., accommodative apparatus. The constant use of this muscular tissue together with the excessive work required of it by the abnormal formation of the globe necessarily results in its hypertrophy. The increased work of this highly organized structure is, of course, accompanied by a corresponding supply of nerve impulses. A still greater task is required of the ciliary muscle when it has to act in one meridian only, as in astigmatic errors where the radius of curvature in one meridian is greater than that of the meridian at right angles to it, as this requires ununiform action.

The consideration of the increased work which has to be performed by this exceedingly delicate and highly organized muscular apparatus and the various reflexes which such an abundant nerve supply necessarily entails, must suggest to us some explanation of many of the nervous symptoms which emanate from this source.

The second principal cause for neurotic symptoms, which I desire to mention, is to be found in the defective action of the extra-ocular muscles.

It may be stated here that the disordered or imperfect action of the extra-ocular muscles in the great majority of cases is due to a preexisting abnormal formation of the eye-ball—a variation from the normal standard, in other words. The eyes are carried

* Read before the Virginia Medical Society at its recent meeting at Newport News, Va.

through their relative movements by twelve small delicate muscles which are controlled by six motor nerve trunks and the strength varies in different cases and even in the same case from day to day. Realizing these facts it must be apparent how difficult it is in some cases and how impossible in others to estimate accurately the strength of the extra-ocular muscles.

The principal reason why extra-ocular muscle lesions are secondary to refractive conditions is because of the intimate association between accommodation and convergence. Increased nerve impulses thrown out to bring about accommodation are in part spent in causing convergence.

When we are dealing with visible muscular errors, e. g., squint, with coexisting unequal vision in the two eyes, we are not confronted with nearly so complex a problem as when the two eyes have the same and the muscular error is latent and only discoverable by instruments of precision. In this latter instance the two eyes are making continual efforts to work with each other.

The symptoms produced by eye-strain are to some extent recognized but it does seem to me that they increase the intensity of the nervous symptoms in many conditions where they pass unrecognized. Aside from the headache produced by organic and inflammatory conditions I believe that it is safe to state that it is a factor in practically all cases. It presents no special characteristics. I have long since concluded that no particular train of symptoms is pathognomonic. There may be pain in the front of the head and in the eyes or in the back of the head or even in the top which is said to be the least characteristic. Habitual pain in the back of the head sometimes running down the spine is about as constant as any symptom and it is often mistaken as symptomatic of some other condition.

It is the rule rather than the exception for patients never to suspect that the eyes are at fault so long as they see well and in fact it is oftentimes a difficult task to convince them that such is the case. It is not infrequent for the headache to be accompanied by nausea and vomiting. The headache may be constant, intermittent or vary in intensity; sometimes brought on by use of the eyes for near work it may not develop until the following day. Frequently the attack is precipitated by riding on the train, looking out of the windows at rapidly moving objects or to endeavor to read. Driving in bright sunlight has a similar effect. It is common for excitement, exhaustion, the menstrual period, hunger, etc., to bring on an attack. It is evident, of course, that eye-strain is not the sole

factor in these conditions but it may be the only one of practical importance because in many cases it alone can be remedied and its correction will relieve the condition and prevent to a great degree the drain upon the nervous system, allowing it to regain its tone.

The clinical manifestations are influenced by the requirements made of the eyes in way of close work and the endurance of the nervous system and ocular tissues as determined by the general health. In many cases the struggle between the desire for distinct vision and that for binocular vision engenders nervous symptoms of the most diverse character. The most happy result that can be obtained in these cases is for them to learn to ignore the use of one eye. When binocular vision is obtained it is accompanied by indistinct vision and endless discomfort and pain. Such cases we usually have to class as eye-invalids and they constitute that class which supplies material for the enthusiast upon muscle-cutting.

Higher degrees of refractive errors with more or less imperfect vision produce less nervous symptoms because the retina has less functional activity from not being so highly organized and for the further reason that less efforts to obtain binocular vision is made. It is scarcely necessary to mention the importance of the elimination of eye-strain in those afflicted by chorea and epilepsy in early life.

Now, it is well understood that there is an intimate relationship between the practice of ocular refraction and physics but we must not regard the subject from a too mathematical point of view. Even figures must give way to physiological demonstration. We will always succeed so much the better in adapting eyes to what they are destined to accomplish in proportion as we associate more closely perfect knowledge of theory with the most careful clinical observation. That the proper adjustment of glasses will relieve completely a large percentage of the cases which suffer from eye-strain is beyond question. A certain percentage of these cases is greatly benefitted and a minority of them are not improved even though the cause for the symptoms may be located.

In prescribing glasses which do not improve vision and actually in some cases haze the distant vision we are confronted with various difficulties. Indeed, it would be impossible in most cases to succeed in persuading the patient to wear the glass if we did not forewarn them that they would encounter such difficulties. Nothing is more important to know about wearing glasses than that the glass which gives the best distant vision is by no means the best

glass for the relief of nervous symptoms. On the contrary the glass which has the most beneficial effect is usually unsatisfactory at first but the persistent wearing of such a glass will allow of perfect distant vision as soon as the spasm of the accommodative apparatus relaxes.

Another great difficulty is to get patients to wear glasses constantly. Vanity in some cases, in others the intense annoyance produced by irritation of the nose and ears are contributing causes to this. Again, they are discouraged because the symptoms which we are trying so hard to combat are not always relieved or even improved when the glass is first applied. Indeed, they are occasionally made worse for a few days.

In conclusion I would emphasize the following points:

1st. The correction of nervous symptoms is an even more important reason for wearing a glass than the improvement of vision.

2nd. The glass which accomplishes this is by no means the one which gives the best distant vision when first worn.

3rd. Practically all chronic functional nervous symptoms are aggravated by eye-strain and often symptoms attributed to neuralgia, gout, etc., are more properly speaking eye-strain.

Congenital Absence of the Left Eye.

By H. P. Coile, M. D., Knoxville, Tenn.

Congenital absence of the eye is of such infrequent occurrence that I wish to put on record the following case:

On Sept. 10 at 2 a. m., Mrs. S., white, age 17, primipara, was delivered at term of a boy weighing $7\frac{1}{2}$ pounds. The mother had a good family history and was herself free from any suspicion of disease. The labor was somewhat prolonged owing to an ill shaped pubic arch. The child was born, however, without the aid of instruments.

An examination of the infant revealed the fact that the left eye ball was absent. There was no pus nor any evidence of former inflammation. The palpebrae were a little under normal size and the fissura palpebrarum correspondingly small. The right eye was normal, and there was no other defect.

My first impression was that the case was one of prenatal ophthalmia resulting in the total destruction of the eye ball. The history of the parents as to venereal disease was upon inquiry found to be negative.

The case is new in my experience, and I do not remember to have read any report of a similar one although I have not searched the records. I am led to believe, however, that congenital absence of an eye is comparatively infrequent.

Report of a Case of Secondary Hemorrhage, Following Tonsillotomy, Measles.*

By Clarence Porter Jones, M. D., Newport News, Va. Visiting Ophthalmic and Aural Surgeon to the Newport News Hospital, also the Dixie Hospital, Hampton, Virginia, Member Virginia and North Carolina State Societies, Seaboard Medical Association, Richmond Academy of Medicine and Surgery, Newport News Medical Society and Elizabeth City County Medical Society, etc.

On January 22nd, last, I saw Miss J., aged 20 years, a strong, robust looking woman, weighing about 145 pounds. She consulted me for difficulty in swallowing, saying that several times each winter she had a spell of protracted sore throat. On inspection, she exhibited enormously hypertrophied faucial tonsils. No other abnormal condition detected. I removed both tonsils under cocaine, hemorrhage being about two ounces, both tonsils bleeding. The hemorrhage lasted about fifteen minutes. In about six hours, being then 7 p. m., I was summoned hastily to see her and found that she was having a profuse hemorrhage from the root of the left tonsil. This was stopped with tannic acid applied on absorbent cotton. This recurred at intervals of half an hour until two-and-a-half hours later, when the bleeding was stopped entirely by an application of powdered suprarenal glands applied as the tannic acid had been. The total secondary hemorrhage amounted to about twenty-two (22) ounces. I left her at 11:30 p. m. The next morning she was well broken out with measles, having been exposed and at this time expecting an attack, which fact she forgot to mention to me the day before. I referred her to her family physician for treatment, and he reported she had an ordinary attack, promptly convalescing and she since enjoyed good health. There is no specific or hereditary taint in the family, no menstrual trouble and the above occurrence was ten (10) days before the expected period.

The case is interesting in several phases.

1st. In the eruptive fevers we have a condition of diminished coagulability of the blood.

2nd. There seems to be some vaso-motor disturbance in the arterioles and no surgical operation denuding much surface should be undertaken.

3rd. The superiority of suprarenal glands was exhibited over tannic acid in controlling hemorrhage.

Cases in literature are somewhat rare along this line.

Bardes mentions a similar secondary

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hemorrhage occurring after tonsillotomy, the patient breaking out with scarlet fever some eight (8) hours after operation.

Some Thoughts Suggested by a Case of Urinary Fistulae Following a Vaginal Hysterectomy.*

By J. W. Henson, M. D., Professor of Anatomy and Demonstrator of Orthopedies in the University College of Medicine and Surgeon to Virginia Hospital, etc., Richmond, Va.

Better facilities for preliminary education, well equipped Medical Colleges, perfected hospitals, careful State Medical Examining Boards and an educated public, have each shared in giving the country better physicians and surgeons.

These influences, however, can not perfect; they only lay the foundation. A professional man's final development is determined partly by his surroundings—chiefly by his own efforts.

Tie a child's arm by its side sufficiently long and the result will be a withered member.

It matters not how thorough his preliminary education, collegiate course and hospital training, one is but a professional child at the end of such training.

After this comes the time for real growth. It is the careful study of every case, (great or small) that presents itself which produces the successful diagnostician, the man of sound judgement and ready resource.

Whatever line of work is chosen, let us see to it that every qualification for such work is developed or professional cripples will result—figuratively, men with withered members.

No attempt will be made in this paper to notice all the causes producing the medical and surgical cripples we meet. Attention is invited to only one cause—one operating in the field of surgery. It is this:—the burning desire to do brilliant operations, visceral surgery, without the energy to prepare for any kind of surgery that may present itself, or, worse still, without that qualification which should belong to every surgeon—viz., a desire to relieve human sufferings, however tedious and unattractive may be the work indicated. The following case will serve as an illustration:

A colored woman of 40 years of age or more came to me in July last to consult me concerning a "weakness of the bladder." The urine dribbled constantly, the bladder never retaining enough to be passed voluntarily. Being entirely unfitted for work, the poor woman earnestly sought relief. She gave the history that several

months before a surgeon in one of our largest cities had done for her a vaginal hysterectomy for uterine cancer. The dribbling of urine had begun while in the hospital, after the operation. She stated that both the surgeon and the physician, who had referred her to him, examined her repeatedly with the speculum, after her convalescence from the hysterectomy, and that each told her there was nothing the matter with her bladder but weakness, that no other operation was indicated and that in time she would be well, with the aid of some medicine which they gave her to take by mouth.

I have questioned her again and again, since being in my charge, trying to find a break in these statements, but she holds to her original story. She is intelligent and I am satisfied is honest in this matter. At her first visit to my office, a urinary fistula was disclosed upon the introduction of a vaginal speculum. A sound was passed through the urethra, bladder and fistula into the vagina, to prove the opening to be vesico-vaginal. Thinking this was all, I made no further examination at the time, in which I was at fault.

The patient consented to an operation, which I did on August 1st, but not the one I had intended doing. When I exposed the whole field with vaginal retractors to begin work, there was revealed another fistula, uretero-vaginal. The left ureter opened directly into the vagina. This was proven by passing a probe up the ureter and introducing a sound into the bladder. The two instruments could not be brought in contact. The vesico-vaginal fistula, a mere slit, nearly $\frac{1}{4}$ inch in length, was $\frac{3}{4}$ inch or more anterior to the transverse vaginal scar from the hysterectomy and a little to the left of the median line. The ureteral opening was in the scar and about $\frac{1}{2}$ inch to the left of the median line.

An incision was made into the vaginal mucous membrane, elliptical in outline, so as to encircle the two openings, one end of the ellipse being $\frac{1}{2}$ inch or more anterior and to the right of the vesico-vaginal fistula, the other end an equal distance posterior and to the left of the ureteral opening. Along the whole line of the incision the mucous membrane was dissected back, each way, so as to leave a raw strip less than $\frac{1}{4}$ inch in width, outlining the ellipse. The sutures were now placed each one as follows: A needle, threaded with fine silk worm gut, was introduced through the mucous membrane $\frac{1}{8}$ inch or less beyond the outer edge of the denuded strip on one side of the ellipse and brought out at the inner edge of this strip close to but not engaging the mucous membrane. It was

*Read before the Medical Society of Virginia during its Twenty-Third Annual Session, held at Newport News, Va., September 23-25, 1902.

then carried across the ellipse and passed in a manner the reverse of that just described, in at the inner edge of the denuded strip and out through the mucous membrane about $\frac{1}{2}$ inch beyond the outer edge (of the strip).

When the sutures were tied the elliptical piece of mucous membrane encircled by the incision and dissection, as well as the fibrous and muscular tissues of the vagina corresponding to this area, folded upon themselves forming an extension of the ureter, so that the latter opened into the base of the bladder through the old vesico-vaginal fistula. Until the eighth day the bladder was drained of urine by Skene's self-retaining catheter, which was removed and cleaned daily. The sutures were removed on the twelfth day. The result is all that could be desired. The bladder has not leaked a drop since the operation but is doing duty in a perfectly normal way.

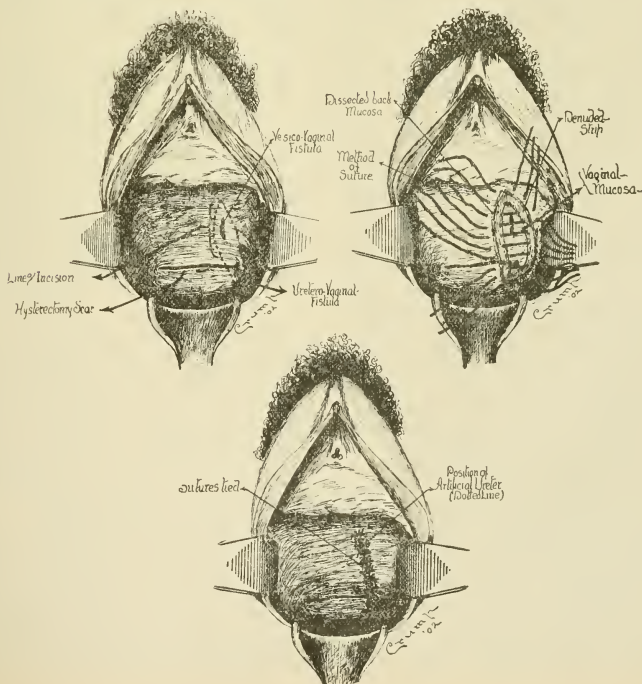
The accompanying cuts may further illustrate the operation as performed. The upper *left* hand figure shows the position of the two fistulæ, the scar from the hysterectomy, and the dotted line outlining elliptical incision. The upper *right* hand figure shows the denuded strip made by

dissecting the mucous membrane back, each way, along the line of the incision, and the sutures in position before tying. The *lower* figure of the three illustrates the appearance after tying.

Dr. X. O. Werder, of Pittsburg, read at the last meeting of the American Medical Association a paper, in which he described an operation for double uretero-vaginal fistula.

Although his operation and mine are not and could not be very similar from the nature of the two cases, yet there is just enough similarity in the incision and dissection, to justify me in stating that I was not at the last meeting of the American Medical Association and knew nothing of Dr. Werder's case until I saw his article in the Journal of August 16th.

I submit this paper for three reasons:—*first*, because I consider the case reported a unique one, *second*, because I desire to register a plea that every one who bids for surgery shall take as a motto "Thoroughness," *third*, because I am anxious that the consideration of the subject shall stimulate me to apply to my "withered members" the electricity and massage of careful attention to and close study of cases, that I may not be caught napping by the other fellow.



The Relation of Hygiene to Progressive Surgery.*

By Granville P. Conn., M. D., Division Surgeon
B. & M. Ry., Concord, N. H.

It is perhaps as well an established fact as any we have in medicine that ever since Surgery began, the most of the mischief has been done by the surgeon himself.

Tactus eruditus was the embodiment of a surgeon's knowledge in diagnosis and prognosis, yet this willing and tender, though unclean hand was for many generations the medium by which the germs of infection found their way into the wound. Much laborious laboratory work was done in Europe and America to evolve the cause of the infection, but it was Lister who first proclaimed the true gospel of surgical cleanliness, by which the surgeon could avoid suppuration, and banishing the post-operative pests from the operating theater, securing clean sterile dressings for the patient, command the attention of the trained nurse for an assistant, both before and after the operation, the operator was able to save many lives, and gaining confidence in the technique by his clinical experience, was encouraged to enter upon new fields of surgical work that heretofore had not been considered as receiving the sanction of the profession only as *dernier resorts*, and would never become a part of a surgeon's daily duty. To-day we may know that with our knowledge of sanitation, McDowell was only the advance guard in abdominal surgery; at the same time we are constrained to admit that under the hygienic conditions existing at that period of American Medical history, his success was not what we would expect from our experience during the past ten or twenty years. The profession of medicine to-day rests upon the developments evolved by three men, Jenner, Warren and Lister. Vaccination, anaesthesia, surgical cleanliness. The first and second developed the necessity of the third, without which the others would be incapable of filling the measure of their true purpose.

"Although anaesthesia rendered patients insensible to the pain of the surgeon's knife, yet it did not rid surgery of all its terrors, for the post operative sufferings, as manifested by erysipelas, tetanus and blood poisoning in its various forms, were the constant attendant of every surgeon. Wounds reeking with what we were taught was healthy pus, and patients dying in large numbers from septic infection were common sights in the years following 1846."

The progressive "up-to-date" conditions

that are now demanded in all forms of surgical practice may be found along the lines of the technique of its work, and when contemplating new fields in which to develop his skill, the surgeon has most successfully invaded cavities and tissues that only a few years since were considered entirely outside the work of any except the specialist. It is only a few years since, that the surgeon was permitted to open the cavities of the human body except as a *dernier resort*. Until recently the mortality in abdominal operation, even when performed by specialists, was so great as to deter others from taking any part in this work, except as assistants or from curiosity to witness any and all operations performed within the radius of the local surgeon's observation. To-day the number of operators who open any and all the cavities have increased until the majority of surgeons do not hesitate to operate in almost any case.

It is but natural to inquire into the reasons for this remarkable change in the surgeon's art. The public look upon it as a great surgical feat, and applaud every new operation or invention. Writers for the public press are able to express their views with great familiarity upon the possible originality and conception of some hitherto unknown or unrecognized disciple of Esculapius.

The average laymen seem to expect the surgeon will invent new instruments and new methods, and should he declare it necessary to perform an operation for the radical cure of some disease with an unpronounceable name, the origin of which would terrorize an ordinary student of Gould or Noah Webster, so much the better for his fellows will excuse him should he fail to make it clear that he had any conception of what he was vainly trying to explain.

The methods employed to bring the latest, if not always the most approved work of the surgeon to the notice of the public, may or may not meet with the approval of the profession, but the modern ideas of hygiene are exemplified in the operating theater, in the preparation of the patient, the assistants, the dressings; the attention given to the diet, ventilation of the room, as well as the careful supervision of the surroundings, appeal to the profession, the patient and the friends, as it is something which they can comprehend and understand.

The true surgeon of to-day, aims to do the most of his work before the operation rather than after. It is his great ambition to avoid sepsis, and secure rapid union, which was exceptional a generation ago. The human anatomy and the physiological laws of health are the same as of old. The pathological conditions to which the sur-

* Read before the recent meeting of the American Academy of Railway Surgeons.

geon's attention is called have had their prototypes many, very many times in the past. In our operations to-day, we sever the same tissues, ligate the same blood vessels, remove limbs, enucleate tumors, and find diseased and abnormal conditions in the cavities just the same as they were found by the observant physician and surgeon thirty years ago. In our work it is the technique that has changed, rather than the mechanical operative procedure. This has been brought about in the great advance in hygiene and sanitation. Familiarity with the details of sanitation renders the patient, the family, the nurse, the assistants, and the surgeon thoroughly imbued with the true "gospel of cleanliness." The rest is comparatively easy and good results naturally follow.

In connection with this great modification of the work of the surgeon, allow me to call your attention to the fact, that hygiene and sanitation in medicine and surgery have made very rapid strides, and taken a front position in the technique of the sick room, from about the time when women, as educated members of the profession began to apply for recognition in our medical associations. This may be only a coincidence, but as neatness, good order, and system are a part of the home education in every well regulated household, it is but fair to admit that precept and example have not been lost, and may have had its influence with the profession.

Whatever that is new and untried in the surgery of the present which the operator in the future may bring to the aid of suffering humanity, will without doubt bear the impress and seal of surgical cleanliness; the arrangements of its details will be made by a nurse, who is a graduate in household sanitation, and success will ultimately follow, for it will receive the sanction of the Goddess Hygeia.

The Local Use of Acetate of Aluminium.

By Southgate Leigh, M. D., Visiting Surgeon,
St. Vincent Hospital, Norfolk, Va.

This preparation under the name of "Liquor Burow" is so widely employed in our section of the country both by the profession and by the laity that I deem it of sufficient importance to bring it before the readers of this journal, and especially since it has proved itself to be so efficient a remedy. I wish to state distinctly that I claim no originality in connection with its production, although I did introduce it into local use. My attention was first called to the remedy several years ago by Dr. Lustgarten, of New York, who suggested its use in connection with several cases of

acute skin trouble in the wards of Mt. Sinai Hospital, of that city. Later I saw it employed very extensively in the Clinic of Prof. Kaposi, attached to the General Hospital of Austria. Its preparation was so simple and inexpensive, while the effects of its use were so magical, that I wondered at its not being in general use in this country long ago.

The old adage, "Nothing new under the Sun," is markedly exemplified in the case of this remedy. Although comparatively a new preparation, which has come to us from the other side of the ocean, where it was probably discovered in a scientific way, yet on investigation it turns out to be practically the same as on old household remedy frequently used by the country people, the old fashioned "Vinegar and Clay."

The usual formula of Liquor Burow is as follows:

Acetate of Lead	7 grammes.
Sulphate of Alum	20 grammes.
Distilled Water	220 grammes.

This is allowed to stand for two hours. Chemical reaction takes place, resulting in a solution of the Acetate of Aluminium, the Sulphate of Lead being precipitated. Thorough filtering is required to get rid of the latter. The resulting liquid contains Sulphate of Alum in addition to the Aluminium Acetate. This is wise as it absolutely prevents any of the lead preparation being left in the remedy. I have experimented some with a view of reducing the amount of the Alum, but find it unwise to do so, as any reduction will result in a solution which will show signs of the presence of lead when tested for that metal.

Liquor Burow keeps well and mixes with either hot or cold water to any dilution desired. It has a mild antiseptic power and is moderately astringent.

I know of no single preparation in medicine which has a wider field of usefulness, and which gives at the same time more positive results. I hesitate to name the large number of ailments in which I have successfully employed it, for fear that it may be looked upon as a "Cure all."

It might be of interest to state in this connection that some years ago one of my patients on whom I used the preparation in a case of an inflammatory affection of the foot, was so much pleased with its effect that he combined with a local druggist, got hold of the formula in some way, and put the preparation on the market under the name of "Quramol," a most ingenious title! It is needless to say that this was done against my most earnest protest. He even went so far as to copy word for word the

directions which I wrote out for use on his foot, and put them on the label of his bottles. I am glad to say that the company which was formed for the manufacture of the medicine came early to grief.

Liquor Burow is useful in nearly all superficial inflammatory conditions, especially of an acute or subacute nature. In all superficial injuries such as sprains and contusions, it partly or entirely prevents the usual signs of inflammation which are apt to follow. In many cases it acts as an anodyne by reducing the heat and swelling of the affected part. It may be used on wounds, as well as on the unbroken skin, and especially where there are signs of an acute inflammatory condition, or such a condition is feared. Probably its best effects are shown in acute skin diseases, such as Erythema, Urticaria, Eczema, Erysipelas, etc. In such, if properly employed, it rapidly reduces the pain, heat, redness and swelling. In superficial burns, by applying it promptly, a great deal of the severe resulting dermatitis may be prevented; and even in the later stages of burns, it may be used from time to time, with much benefit, to reduce the inflammation.

In the troublesome furuncular condition in which the skin of "run down" people sometimes gets, Liquor Burow helps us greatly. In some of these cases it aborts threatened suppuration, and even where an abscess, small or large, is inevitable, it reduces the surrounding inflammation, and hastens the pus formation, but localizes it in a smaller area. The greater the amount of local heat, the cooler should be the solution.

In Erysipelas for example the most gratifying results are obtained by covering the affected area with several layers of gauze wet in an iced cold solution of Liquor Burow, and keeping the gauze constantly saturated with the cold liquid. No other treatment begins to give such comfort to patient in relieving the pain, burning, and feeling of tenseness which is usually so distressing. It also checks the spread of the inflammation. In severe cases, especially about the face it is well to apply a small ice bag over the wet gauze at its upper edge near the scalp. In face cases a mask of gauze cut to fit the features is convenient, leaving openings for eyes, nostrils and mouth. The wet gauze must be made to come into direct contact with every part of the affected skin, and may be reinforced by extra pieces as required. The mask ought to be removed at least once every half hour, thoroughly soaked in the cold solution and reapplied. Every few minutes the nurse should add solution to it by means of a small sponge.

About the face Liquor Burow is employed in a dilution of one part to eight or ten parts of water, that strength not being injurious to the eyes. In other parts it is usually best in a strength of one part to four or six parts of water. Simple bathing of the skin with the remedy has but little beneficial effect. It is necessary that *the liquid shall be kept almost constantly on the affected parts*. In the cases like Erysipelas and severe Acute Eczema it is best to make constant wet applications. Such troublesome treatment is not essential in ordinary cases, changing the application once in a few hours being sufficient. In these cases in order to prevent evaporation of the liquid we cover the wet gauze with an impervious protective such as rubber tissue or oiled silk, the whole being held on securely by a retaining bandage. The frequency of the re-wetting depends on the severity of the inflammation. In mild cases changing the dressing morning and night, or even once in twenty-four hours is sufficient, while in the more severe, it is well to re-wet every two or three hours. This frequent adding of fresh solution does not necessitate taking off the dressing. Fresh liquid may be poured on the gauze by removing the bandage and protective, or in a simpler manner the upper edge of the protective may be raised slightly and the fluid poured in. In using such a wet dressing it is important once or twice in each twenty-four hours to leave the skin exposed to the air for at least a half hour, so that it may get thoroughly dry, and thus prevent a "soggy" condition.

In the acute skin diseases, as soon as the signs of inflammation have fairly well subsided, it is often best to discontinue the Liquor Burow or to use it at intervals. Then apply it at night and apply powdered starch and a dry dressing in the day, or even omit the wet dressing altogether for a few days.

In Acne where it is necessary to open the little furuncles which form in the skin, the application of a wet dressing of Liquor Burow for an hour or two afterwards, takes away all of the irritation produced by that treatment.

In the most troublesome disease of Psoriasis, Liquor Burow is of great help in two classes of cases, first in the acute manifestations of disease, and second in those cases which come to us covered with masses of tenacious scales. In the latter the wet dressing softens up the crusts and thus permits us to clean them off thoroughly so as to get our healing ointments at the seat of the disease.

The remedy aids in a similar manner in chronic Eczema where the parts are cover-

ed over with hard and tenacious crusts. Ointments and other curative applications do no good in these cases, because they get only at the top of the crusts and do not reach the real disease. Indeed these crusts and scales often collect and hold the poisonous discharges of the diseased surfaces and are thus made a constant source of irritation. The application of the wet dressing for a few days, gently cleaning off the parts each time the dressing is changed, will usually in a short time put the diseased skin in the best possible condition to receive the good effects of the other healing remedies.

I believe that failure in the treatment of many skin diseases is due often to the improper use of good remedies. So often do we hear of patients getting a "salve" for some skin affection without any directions as to how to use it. An ointment applied to a surface affected with a pustular eczema and covered with "scabs," will do harm instead of good, by still further retaining the purulent discharges. If the "scabs" and discharges are first cleared away by a few days application of the wet dressing, the same ointment may do effective work.

As a rule water is irritating to all eczematous eruptions. Liquor Burrow is on the contrary soothing to such conditions, and may be used where it is necessary to bathe the parts affected.

In mild superficial infections of the skin the wet dressing, if applied early enough, will abort suppuration. And if suppuration is inevitable, it will make it more circumscribed by reducing the surrounding inflammation. In infected wounds it allays the neighboring inflammation in a similar manner, and also acts as a mild antiseptic on the purulent discharges.

In sprains and bruises the wet dressing quickly removes the pain, and prevents to a great extent, the subsequent swelling and inflammation. In a sprain of the ankle, for instance, if the joint is immediately enveloped in a wet dressing of Liquor Burrow and kept wet and cool, the result is most gratifying. In from twenty-four to forty-eight hours this application will do its work so well that the joint may be strapped and the patient allowed to go about without discomfort.

In stiff joints where passive motion is necessary to restore their function, the treatment usually produces a painful and inflamed condition for some time afterwards. This may be to a great extent prevented by the prompt application of the wet dressing to be left on for a few hours after each treatment.

I have experimented some little in trying to get up an ointment containing the

Acetate of Aluminium, but without sufficiently good results to submit it to the profession. The comparatively recent preparation called "Antiphlogistine," probably owes its fairly good qualities to the Aluminium which it contains.

In conclusion I would state that Liquor Burrow has helped me more in the practice of medicine and surgery than all the other external applications combined, and I can heartily recommend it to the profession for use not only in the diseases mentioned, but also in many others of a similar character.

Pneumonia.

Stephen Smith Burt [Indian Lancet] says in concluding a paper:

To repeat concisely what this essay has ventured at some length to uphold, pneumonia is an acute, self-limited, systemic infection, whereof the concomitants, though various, are chiefly pulmonary; it is endemic, occasionally pandemic, in many countries, and it occurs everywhere sporadically; regarding the lung tissue, the affection seems more in the nature of an exudation than an inflammation; the frequency of detection of the diplococcus in living blood in pneumonia suggests that by improved technique it will be found, like the plasmodium in malaria, invariably; infection of the heart muscles with resulting degeneration has more to do with heart failure than mechanic obstruction; the exact significance of pathologic leucocytosis requires further elucidation; pre-existing fertility, as to the condition, determines the degree of infection, rather than the number of microbes, which are in quality unchangeable; although neglect of personal hygiene and of sanitation predisposes to pneumonia, unqualified good health, on the other hand, is a protection therefrom.

Bullous Quinine Eruption.

Evans in the British Journal of Dermatology, reports a case of bullous quinine eruption." The patient was a married woman about thirty-two years of age. Twelve years ago she had taken a tonic containing quinine (which she had previously taken with impunity), and a few hours later an extensive erythematous rash had appeared. Two years later, after a dose of quinine, large bullæ developed in the forearms. The present attack arose from taking some citrate of iron and quinine (probably containing from two or four grains of quinine). Twelve hours after taking it an erythema appeared on the forearms, and large bullæ appeared on the knees and feet. There was a great amount of irritation.

Postscarlatinal Diphtheria.

Pugh, in the *Journal of Hygiene*, July 1st, 1902, states that previous to 1895 only cases of scarlet fever which showed clinical diphtheria, having membrane in the fauces or exhibiting laryngeal symptoms, were designated postscarlatinal diphtheria; since that year all cases of secondary throat illness associated with diphtheria bacillus have been described as tonsillitis. The influence of the change in the basis of diagnosis and the introduction of a new method of treatment is noticeable in the statistical tables. A terrible mortality occurred among patients attacked by this complication in the years before the introduction of antitoxin, when diphtheria assisted in producing a fatal issue in over 12% of the scarlet fever deaths. This may be happily contrasted with the conditions in 1901, when of 3,004 scarlet fever patients under treatment only one died who had suffered from secondary diphtheria. The number of female patients developing secondary diphtheria is larger than that of males. He states that this affection leads to the following conclusions: 1. The principal cause of postscarlatinal diphtheria is the admission into the scarlet fever wards of patients who, whether suffering from clinical diphtheria or not, are carriers of virulent diphtheria bacilli. 2. In large centers of population where diphtheria always exists, diphtheria bacilli are to be found in a not inconsiderable proportion of school children. In the absence both of evidence of clinical diphtheria and of a history of exposure to that affection, the bacilli are, in a majority of cases, of the nonvirulent or saprophytic type and of little hygienic importance; in cases, on the other hand, where the clinical supports the bacteriologic examination the bacilli are almost entirely virulent, and therefore dangerous; while in cases where the patient is known to have been exposed to infection the chances are great that the organisms are of the pathogenic variety, and such cases should always be regarded with grave suspicion. 3. On account of the prevalence of the nonvirulent bacillus and the fallacies of single cultures, it may be doubted whether a routine bacteriologic examination of throat and nose of all patients on admission would prove of sufficient value to repay the labor involved. Chief reliance must be placed on a careful inspection on admission, not only of the throat, but also of the nasal cavities, bacteriologic examination being resorted to in cases of doubt. 3. In eradicating infection from an invaded ward bacteriologic methods are, on the other hand, of prime importance, since children with apparently healthy throats and noses are often found

to have acquired the virulent bacillus. An attempt to stamp out any outbreak of diphtheria by bacteriologic examination of the throat alone is, however, futile, owing to the frequent infection of the nasal cavities. 5. Fibrinous rhinitis, which appears to be a not infrequent, though often unrecognized affection of children is a common form of postscarlatinal diphtheria. 6. Although the treatment of diphtheria in the same hospital has no appreciable influence on the incidence of this complication of scarlet fever, it is advisable that precautions should be taken lest nurses harboring diphtheria bacilli carry infection from the diphtheria to the scarlet fever wards. 7. To limit the risk of exposure to infection many-bedded wards should be avoided, and the mixing of patients from different wards prevented.

Case of Non-Development of the Large Intestine and the Greater Part of the Ileum.

Hepburn (The *British Medical Journal*) describes this unusual deformity in a young child two days old, its bowels had not moved, while vomiting of a dark fluid became continuous. The abdomen was but little distended. Some collapse was present. Examination showed that there was a short cul-de-sac opening outward in place of the rectum. An inguinal colotomy revealed the fact that the descending colon ended below in an impervious fibrous cord. The wound was closed at once and a right inguinal colotomy attempted, but it was found that the small intestine was also impervious for the greater part of the length of the ileum. The jejunum, filled with meconium, was evacuated and sutured to the colotomy wound but the baby soon succumbed to shock. Two other children of the same mother had been born with imperforate anus.

The Feeble-Minded and Crime.

Dendy (The *Lancet*. No. 4108.) believes that the main cause of the various forms of human degradation is a weakness of intellect. In the higher walks of life, the weak mind is protected from those forms of degradation which prevail among the poor, but none the less it is often present. The expression of this weakness is seen alike in the corner loafer, criminal, pauper, drunkard, prostitute, vagabond, etc. To care for all these individuals, maternities, workhouses, idiot asylums, reformatories, industrial schools and the like are maintained. It is possible that this entire superstructure of charity might be rendered unnecessary in time by efforts directed toward the very young child. These weak-minded individuals are very pliable at an early age and might be made to grow up as harmless instead of vicious individuals.

Charlotte Medical Journal

EDWARD C. REGISTER, M. D., Editor.

36 SOUTH TRYON STREET, - - -
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SPUTUM OF TUBERCULOSIS.

With the established recognition of the germ of infection which is the etiological bacillus of Tuberculosis, principally found in the sputum of infected individuals, it becomes of the greatest importance to study the conduct of that source of infection and to devise means for caring for the germ laden sputum in every instance and under all circumstances where there is a possibility or a probability of its presence.

The estimation of recognized authority in pathology is that ordinary cases of consumption, will expectorate about seven millions Bacilla in 24 hours. This sputum lodging on walls, floors, bed clothing and the soil, soon dries and becomes dust, in which form it is disseminated freely in the air, to be received by inhalation into the pulmonary organs of innocent individuals, who chance to come into the neighborhood of such polluted atmosphere. With one-tenth of the population so affected, then the soil in all populous sections will soon become laden with the dried sputum, alive with the bacilla of tuberculosis. The only safety under these circumstances is the immunity of individuals who inhale the dust laden atmosphere. That many individuals are immune is definitely recognized and it is known that to gain entrance or to infect, the germ must find lodgment in soil suitable for its germination. The individual who has certain suitable conditions in the lungs with corresponding weak nervous power as the elements which enables the bacilla to assume its generating process. While on the other hand the individual who is strong, readily dispels the germ and is not infected. The same individual who is constituted with a normal physique and who is able to maintain such constitutional strength, under some circumstances, is weakened from that normal standard or reduced to a sub-normal condition and coming in contact or breathing or inhaling the bacilla laden dust is liable to be affected by the germ, during such reduced power or lowered vitality. Such conditions most persons are liable to sustain at various times under the existing want of complete knowledge of perfect health laws. There are persons with uniform fair constitution, though below the normal standard of perfect health, but who pass an otherwise comfortable existence and yet they are at the mercy of such poisonous environment,

which they may not be capable of resisting. These susceptible individuals are the ones which it is the duty of the sanitarians and the state to protect. For such persons the necessity of caring for this germ laden product becomes the duty of the medical profession to exert itself and as individuals to advise and educate the individual patient; and as a profession to guide the Legislative bodies and to lead the members of such legislative bodies to effect means and inaugurate measures whereby those who would be dangerous to many may be guarded, and the sputum cared for, that it may be destroyed before it has the opportunity of being deposited in a media, in which it thrives or is preserved. Such provisions should be arranged whereby those who cannot provide for themselves the means of taking the precautions necessary, will be supplied at public expense and given such aid that no bacilla laden sputum can have the opportunity to be coughed about or expectorated indiscriminately and become a nidus of danger to individuals. The masses should be educated regarding the danger of this infectious disease and of its germ. The instruction should begin in the schools of our land; and of all lands. Various societies for "the prevention of the spread of tuberculosis" have been preparing and distributing literature regarding this disease; this should be systematically continued. Too much cannot be done toward educating the masses regarding the dangers which this disease continuously threatens, and the destruction which it inflicts upon mankind; with the purpose of bringing about the possibility of its being blotted out entirely.

States and municipal boards should regulate all densely inhabited sections so that there is pure air and sunlight admitted into such inhabited quarters. All shops and manufacturing places where men and women work, especially where young persons are employed, should be so controlled that they are free from vicious conditions.

But for the present and until this problem is thoroughly cared for by the authorities under legislative regulations, it is the duty of each practitioner of medicine to so direct each patient and those coming in contact with the case, to care for the sputum, by the afflicted against reinfection and the well against its reception into their system.

Various plans and methods have been devised whereby each patient may secure the destruction of his bacilla laden sputum, and it needs only the intelligence to use the various measures devised. S. A. Knopf, of New York, in his book "Prophylaxis and Treatment of Pulmonary Tuberculosis,"

erculosis" explains quite fully the means for collecting and caring for this expectoration.

Osler, in his revised work on "Practice" has a chapter on prophylaxis of this disease and urges these methods in a very definite manner. Dr. Knopf also in a paper "The Family Physician of the Past, Present and Future," before the American Academy of Medicine, June 7-9, 1902, said his studies in tuberculosis have convinced him that without the aid of the family physician, the solution of the tuberculosis problem is an utter impossibility. He it is who must make the early diagnosis and must also enforce sanitary regulations, which especially among the poor cannot be done by any board of health.

In his oration before the American Medical Association at its meeting in June, 1901, Dr. J. M. Emmer, of Iowa, said: Tuberculous subjects, man and beast alike, should be subject to quarantine restrictions, and its control should be a part of the duty of either a National, State or Municipal Board of Health.

MEDICAL MEN IN LITERATURE.

The physician is usually too bound up in working for the sick to permit any further development. Scientific medicine it is true demands this constant application. But a genius in other lines may thus be pushed into the back ground. That a doctor of general literary talent is usually thus cut off from the active field of letters is thus a sad fact.

For ennobling as medicine is the "Hall of Fame" will seldom contain a tablet to our guild. Humanity expects the mightiest progress in the preservation of life. The populace accept relief from the plague down to minor ills all as a matter of course, their good will, a valuable exchequer 'tis true, to be our reward.

In letters are emblazoned and recorded the joys and sorrows of the human heart, the ultimatum of life. Describing these in the most facile rhetoric and logic is the high work of literature. We commend then the doctor of talent to work out something of lasting literary importance from his most fertile fields of observation. In this, therefore, it is a mistake to begin too young. The material needs time to ripen, and when a man of earnest sincerity in early middle life has something to say it is a duty to set it down. As with other writers, the start must be made. The tradition has been handed down too strongly, we fear, that the physician can alone be but a physical leader. The works of Holmes, of Mitchell, and Doyle show to the contrary in modern times. True Dr.

Holmes did not devote all his life to medicine, but he had found his calling in letters, and has given to the world in the "autocrat" food for thought through the succeeding generations.

Neither does the strenuous Doyle do labor as a practitioner of medicine, but his keen observations in the "Sherlock Holmes" and "Duet" stories were undoubtedly amplified by medical education and discipline. These are but striking examples of brilliant minds in the physician after a wherein talents for letters overshadowed that of physic; and 'twere best for the world that they sung and were singing to the key note of human souls.

A striking example for us all to-day is that of the virile S. Weir Mitchell, a scientific investigator in the poison of snake the cause of disease, the description of nervous symptomatology and the man who advanced nervous disease on an equal footing with Charecot, in France, and who above all else has been a successful therapist claim I have no doubt Dr. Mitchell would like most to retain, though he will be remembered longer as a general writer in literature through his Hugh Wynne and character stories.

Literature is the lasting expression in words of the meaning of life. Poetry that excellent phase of literature. Who better prepared to present this noble art to the world than the physician?

THE AMERICAN MEDICAL ASSOCIATION AT NEW ORLEANS.

One of the important thoughts that should interest the southern members of the medical profession at present, is the New Orleans meeting of the American Medical Association. Much of what the southern members bring to the meeting and put into the programme and spirit of the occasion will be the degree of the results which will be achieved by the Association at the meeting. The labor laid at the shrine will reflect the energy and ambition which those of the South have brought out for the success of the meeting, of which they more particularly have the moulding and fostering care. Every kindly aid offered the chairman of the committee of arrangement Dr. Isadore Dyer, of 124 Baronne Street, New Orleans, La., will add so much toward the accomplishment of a successful meeting. Now is the time to begin the preparation of scientific work to be brought out or produced at that meeting.

Let every southern practitioner strive to aid the meeting by scientific work or by his presence.

MORPHIAMANIA; THE MEDICO-LEGAL RELATION OF THE PHYSICIAN IN.

That morphiamania may be blamed upon the practitioner, who administers the drug upon the subject formerly, or bordering on this drug habit, has recently come before the courts in England. A nurse brought suit against her medical attendant for negligence "for administering to her, and negligently giving her opportunities of administering to herself, quantities of morine, cocaine and other drugs to such an extent that she lost her reason and very early lost her life."

The case was but an attempt to make the defendant liable for the morphine habit, which the plaintiff stated had grown upon her in consequence of his treatment; a new light on an old subject. The patient had been a sufferer from spasmodic asthma and on account of a weak heart the physician had contended that relief of the asthma must be had by morphia, no other drugs having been found that would relieve an "attack." The doctor attended the patient several years, and only received a fee on one occasion. Some of the witnesses for the plaintiff suggested that the reason why the defendant had been guilty of negligence was that he wished to be rid of a troublesome patient, otherwise there was no motive alleged. The jury stopped the suit justly after the defendant had given a clear version of the case; and the jury also made an expression of opinion that action could never be entered.

On such inconsequential and flimsy evidence alone that the physician gave the woman a "taste" for the drug (not upon the dosage) was the suit brought. If such a case should have been sustained there would be no safety whatever in the most difficult of professions; medicine.

Morphia is a drug just as alcohol, cocaine and quinine which the public must know has no legitimate place in medicine to meet positive indications as in the case cited; here the relief of pain and spasm and weak heart is caused the more by both pain and spasm. But such a case as this only serves to show that the physician may be menaced from sources where he by legitimate tradition expects co-operation and honest dealing. No doctor is responsible for the action of weaklings, but if he be of the best fibre he is also anxious to look out for the future health, happiness and moral uplifting of his clientele, and of mankind in general. The absurdity of such a claim, if not its maliciousness, needs to be disseminated among professional men on both sides of the Atlantic, to put us on guard against such unjust accusations.

MICROORGANISMS OF INFANTILE DIARRHOEA; A RECENT INVESTIGATION.

A subject that has the interest and attention just now of the profession, is the report recently made by two gentlemen, Messrs. C. W. Duvall and V. H. Bassett at Baltimore, Md., in their studies and investigations regarding the etiological bacilla of infantile diarrhoea. The work was done at the Thomas Willson Sanitarium, Mount Willson, Baltimore County, Md., a charitable institution, where hundreds of children, sick with summer diarrhoea are treated each summer. This work was conducted under a grant from the Rockefeller Institute of Medical Research; and under the promotion of Professor Flexner, of Johns Hopkins Hospital. Most careful and complete study of many cases of diarrhoea were made; of severe and mild cases, as well as stools of healthy children. These gentlemen remark, "A careful study of the bacterial flora of a number of these cases was made, and from 42 typical cases of summer diarrhoea we succeeded in isolating from the stools *Bacillus dysenteria* Shiga." The specific organism was secured also from the mesenteric gland and the liver.

They recognized the identical resemblance and agreement with the bacilla isolated from cases of dysentery of adults by Shiga in Japan, Flexner and Strong in the Philippines, Kruse in Germany and lately by Vedder and Duvall in this country. In their finding they feel "justified in their conclusions that the summer diarrhoeas of infants are caused by the infection with bacillus dysenteria Shiga, and therefore etiologically identical with the acute dysentery of adults."

Booker, several years ago at the Willson Sanitarium, after very careful study of the bacterial flora of summer complaints of infants, concluded, that "not one specific kind, but many different kinds of bacteria are concerned."

These discoveries and verifications of the etiological bacillus in this disease, which is chargeable with so much loss of life each summer is of paramount importance.

The ability to recognize and know the etiological factor in this disease will more thoroughly enable the profession to combat its progress and possibly in the future to forestall the development of this organism and thus eradicate the disease from its attacks of the human individual.

The further investigation and studies of this microorganism will be watched with unabated interest by the medical profession of the whole world.

BOOK REVIEWS.

Progressive Medicine, Vol. III, September, 1902. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences, Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 421 pages, 26 illustrations. Per volume, \$2.50, by express prepaid to address. Per annum, in four cloth-bound volumes, \$10.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

This third volume for the year of "Progressive Medicine" emulates the attractiveness of its predecessors, and will be found worthy the careful study of every practitioner of Medicine and Surgery.

In this volume the first article covers the Diseases of the Thorax and its Viscera, including the Heart, Lungs and Blood-vessels by that most charming of English medical writers and specialists, William Ewart, of London. It deals with a group of diseases that the physician meets constantly in his daily practice. To him a thorough knowledge of the latest advances in connection therewith is an absolute necessity, and here it is to his hand, gleaned, condensed and in such form as cannot fail of appreciation.

Dermatology and Syphilis are treated by William S. Gottheil, Professor of Deamatology and Syphilography in the New York School of Clinical Medicine, in a clear, lucid style so easy of understanding, and so acceptable to the practitioner who will find not only material for thought but information that will be found of infinite use in the treatment of this troublesome class of diseases that he meets daily in his practice.

Diseases of the Nervous System from the pen of William G. Spiller, of the University of Pennsylvania, will be found not only of interest to the specialist but to all who have this class of patients come before them. The leading Neurologists have been during the past year unusually active, and almost every name of note will be found mentioned in connection with articles of living importance to the profession.

The fourth and last but not least article in the volume is prepared by Richard C. Norris, of the University of Pennsylvania. That it is well done goes without saying, as is all that appears from Dr. Norris' facile pen. The entire ground of Obstetrics, covering Pregnancy, the Management of Labor, Obstetrical Surgery, Tumors Complicating Pregnancy, Labor Obstructed by Pelvic Deformity, Placenta Previa, Postpartum Hemorrhage, the management of

Puerperium and the care of the New-born Infant have been gone over in a painstaking way that insures the reader of "Progressive Medicine" a complete résumé of all that is new in these important branches of the subject.

In short, this volume will be found to contain all that is new on the subject which it covers.

In medical literature so vast is the number of volumes and periodical articles which annually appear that no practitioner can hope, without such an aid as "Progressive Medicine," to keep abreast of the rapid advances that take place, and no one who attempts to do his duty by his patients can afford to be without these volumes, and there is no one, however well he may be posted, but can find ample material well worthy of his careful investigation and study.

Anomalies and Diseases of the Eye. By Flavel B. Tiffany, A. M., M. D., Author of "Anomalies of Refraction and of the Muscles of the Eye." Professor of Ophthalmology and Otology in the University Medical College of Kansas City Mo., Oculist and Aurist to the University Hospital; Oculist to the Geo. H. Nettleton Home. Member of the American Medical Association, Mississippi Valley Medical Society, Missouri Valley Medical Society, Missouri State Medical Society, Kansas State Medical Society Etc., Etc. Hudson-Kimberly Publishing Co., 1902. Kansas City, Mo.

This book entitled "Work on Anomalies and Diseases of the Eye," by Dr. F. B. Tiffany is of unusual value. Its general appearance is attractive, being nicely printed, elegantly bound and not too large to be easily handled. All the subjects considered are dealt with at length in a plain, simple, concise manner, easily grasped by the reader and without the use of superfluous language that detracts so much from medical literature and renders it less useful to the busy practitioner. He deserves credit for the valuable instruction he gives the student in the chapter on "How to Examine the Eye." The methods are so clearly described that a mere tyro can grasp its teachings and at once utilize the information imparted to him. This article alone is worth the price of the book and every student should take advantage of the opportunity to thus secure the knowledge necessary for a beginner, together with so much more information that he will appreciate when he becomes a busy practitioner of medicine. It appears to us to be a highly scientific book, extremely useful to both student and general physician, and

reflects great credit upon its author, whose energies should be fully appreciated by the profession.

Reynolds & Newell's Practical Midwifery. A Manual of Obstetrics for Students and Physicians, by Edward Reynolds, M.D., Assistant in Obstetrics, etc., and Franklin S. Newell, M. D., Assistant in Obstetrics and Gynecology in Harvard University Medical School, Boston. In one octavo volume of 531 pages, with 253 engravings, and 3 full-page colored plates. Cloth, \$3.75, net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1902.

This volume undertakes to render the details of obstetric practice readily available for students and accoucheurs. It covers succinctly the directions which are necessary to the management of every case of gestation, labor and convalescence therefrom, supplying a single clear line of treatment and avoiding the presentation of a mass of material, obsolete or modern, which serves rather to confuse than enlighten. It is therefore intentionally dogmatic in construction and avoids extended discussions. The portion devoted to obstetric surgery and its indications is particularly full and clear, and will command attention.

In its new edition, this work has been practically rewritten, and has been considerably enlarged both as to text and illustrations.

Practical Diagnosis. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M. D., B. Sc. Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Fourth edition, enlarged and thoroughly revised. In one octavo volume of 727 pages, with 236 engravings and 25 full-page colored plates. Cloth, \$5.00, net. Leather, \$6.00, net. Half-Morocco, \$7.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

In preparing the fifth edition of this work, the author has rewritten a very large part of it, and has endeavored by the addition of much new material and by the careful revision of the earlier text to keep the book abreast of the advances in diagnostic technique, with the object of providing the practitioner with a manual which will be an efficient aid to him in studying his cases.

As pointed out in the preface to the first edition, the primary object of the work is to present the symptoms of a disease as they appear, and from this group of symptoms to arrive at a diagnosis, following the methods which are ordinarily employed at

the bedside. Thus, if a patient has paraplegia, the reader will find in the chapter on feet and legs a description of the symptoms of the various causes of the loss of power in the lower limbs, and so be led to a diagnosis of locomotor ataxia, myelitis, or neuritis, as the case may be, and in the chapter on vomiting there will be found discussed the various causes which produce this annoying and dangerous symptom.

The present edition differs materially from its predecessors in that its scope has been broadened to include not only the symptoms, discussed in the manner just described, but also the physical signs and clinical tests which experience has proved to be reliable. These have been considered much more fully than before, with the object of making the book as complete as possible. A large number of illustrations, most of them dealing with actual cases, have been introduced.

It is not surprising that this work has come to its fifth edition in six years, for in addition to its great practical value it is arranged with a view to maximum facility of reference, and its frequent revisions keep it always up to the most recent advances in its subject.

A Pocket Text-Book of Materia Medica, Therapeutics, Prescription Writing, Medical Latin and Medical Pharmacy. By William Schleif, Ph. G., M. D., Instructor in Pharmacy in the University of Pennsylvania. New (2d) edition. Revised and enlarged. In one 12mo volume of 382 pages. Lea's Series of Pocket Text-Books. Edited by Bern B. Gallaudet, M. D. Cloth, \$1.75, net; Limp Leather, \$2.25, net.

This volume is intended to afford a condensed yet comprehensive text-book and work of reference on Materia Medica, Therapeutics, and a range of cognate subjects which can be grouped with manifest advantage. In addition to the paragraphs covering the Physical Properties, Physiological Action, Therapeutics and Toxicology of each medicinal agent, chapters will be found on Prescription Writing, Medical Latin, Medical Pharmacy and Practical Anæsthesia. Tables of Doses, of Poisons and Antidotes, and of Incompatibilities, together with a Therapeutic Index of Diseases and Remedies and a General Index, conclude a volume which it is hoped may prove of service to practitioners as well as students. It contains in a concise, definite and assimilable form the essential knowledge required in the most complete college course on Materia Medica and Therapeutics.

In this new edition which has been demanded within an unexpectedly brief

period, the whole text has been revised, the sections on Medical Latin and Prescription Writing have been considerably enlarged in response to numerous requests, and an annotated Therapeutic Index of New Remedies has been newly introduced.

The Story of a Living Temple, by Frederick M. Rossiter, Mary Henry Rossiter. Fleming H. Revell Company, 63 Washington Street, Chicago; 158 Fifth Avenue, New York; 27 Richmond St. W., Toronto; 21 Paternoster Square E. C., London; 30 St. Mary Street, Edinburgh. Price, \$1.00, net.

"*The Story of a Living Temple*" is a popular yet scientific study of the human body, in which the body is regarded as a temple with living walls, wonderful chambers, windows, a living fountain and myriads of little workers busy building up the temple. The metaphor is not carried so far as to become tiresome, while it is sufficiently elaborated to give the book much of the fascination of a fairy story. * * * The object of the book is to lead children to look upon the human building as a masterpiece of creation, a beautiful structure, worthy to be admired and guarded from injury or abuse. * * * The volume shows much thoughtful care and study and its literary style is simple, dignified and pleasing.

My Dogs in the Northland, by Egerton R. Young, Author of "On the Indian Trail," "Three Boys in the Wild Northland," Etc. Character studies of great dogs. Fully illustrated. Fleming H. Revell Company, 158 Fifth Ave., New York; 63 Washington St., Chicago; 27 Richmond St., W. Toronto. Price \$1.25 net.

Experiences with Eskimo and St. Bernard dogs, covering years of sledge travel in the frozen wilds of British America. An exciting story in which the marvels of dog instinct, intelligence and strength play the chief part. To make the acquaintance of Jack, Cuffo, Voyageur, Rover, Kimo, Muff, Caesar and Koonia is to find out that every dog, just as much as a person, has his own individual character, and must be dealt with accordingly. Terrible perils, wonderful escapes and sudden emergencies mix with the most comical situations.

Transactions of the Medical Society of New York, 1902.

To receive the annual transactions of this society is a privilege we appreciate. The volume contains about six hundred pages with many illustrations. Dr. F. C. Curtis, of Albany, N. Y., is the proficient and popular Secretary.

A Text-Book of Physical Diagnosis. For Students and Practitioners of Medicine. By Egbert LeFevre, M. D., Professor of Clinical Medicine and Associate Professor of Therapeutics, University and Bellevue Medical College, Attending Physician to Bellevue and St. Luke's Hospitals, etc., New York. 12mo. 440 pages, with 74 engravings and 12 plates. Cloth, \$2.25, net. Lea Brothers & Co., Philadelphia and New York.

This work, although intended primarily for students and written by a teacher of long experience in one of the largest medical colleges and a clinician of high standing in three of the New York hospitals, will be warmly welcomed by practitioners for its concise presentation of the most recent findings in its important field.

Dr. LeFevre gives careful directions and instructions for Inspection, Palpation, Percussion, Auscultation, etc., in Diseases of the Respiratory and Circulatory systems of the Abdominal organs. The significance of these manipulations; respiratory and cardiac sounds, their production and modifications, both normal and pathological, receive very full explanation. Special chapters are devoted to Diseases of the Respiratory Tract, Heart, Pericardium, Blood-vessels, etc., and in an excellent section, illustrated with 12 full-page plates, the author covers the latest results in X-Ray Diagnosis. The volume is moderate in size and in price but exceptionally large in practical value.

Transactions of the Medical Association of Georgia, 1902.

We value very much these annual volumes of transactions. There is no medical organization in the South better equipped and doing better work than this Association. It has over seven hundred active members and its annual report is usually a large volume of five or six hundred pages, profusely illustrated and substantially bound. Dr. Louis H. Laws, of Atlanta, is Secretary.

Transactions of the Medical Association of the State of Alabama, 1902.

This association was organized in 1847. Without interruptions it has progressed and developed until now it has several hundred active members and produces an annual volume of transactions equal to any State society in the country. Dr. G. P. Waller, of Montgomery, is Secretary and he does his work well.

LITERARY NOTES.

Barrie's delightful serial, full of humor and pathos, "The Little White Bird," dominates the interest in Scribner's for October. Even his most ardent admirers will be delightfully surprised by the versatile fancy shown in the fairy tale of Peter Pan, which is the feature of this installment. It is written with a grace and delicacy that even Barrie has never surpassed.

Artistically this number is made notable by a cover in color from a design by Mills Thompson; a spirited drawing by Yohn used as a frontispiece and printed with a tint; and a series of four Western types by Frederic Remington in his most vigorous manner, depicting the Cow-Boy, the Scout, the Cossack Post and the Half-Breed. The original colors are beautifully reproduced. McCarter, James Preston and George Wright are other artists here represented.

The leading artistic feature is a brief appreciation of the work of J. Q. A. Ward by Russell Sturgis. The hundreds of thousands who admired the naval arch of New York will recall the crowning Victory by Mr. Ward. They are also familiar with the Washington on the Sub-Treasury steps, the Beecher in Brooklyn, the Greeley in front of the Tribune office and the General Thomas in Washington. All these are beautifully reproduced in this article.

The October-December number of the Forum which, it will be remembered, is now published quarterly, contains articles by specialists, reviewing the progress of the last three months in various departments of thought and activity. Henry Litchfield West deals with "American Politics," devoting special attention to the President's speeches and the Congressional campaign, while A. Maurice Low treats of "Foreign Affairs," including the changes in the British administration, the renewal of the Triple Alliance, and the continued unsettlement in China. A. D. Noyes writes on "Finance," Henry Harrison Supplee on "Applied Science," Frank Jewett Mather, Jr., on "Literature," and Henry T. Finck on "Music." Russell Sturgis' paper on "Sculpture" is an exhaustive analysis of recent tendencies in this form of art as practised in America. The subject of "Education" is divided between Ossian H. Lang and Dr. J. M. Rice, the former discussing the general outlook, and the latter giving an account of some special investigations into the teachings of arithmetic. The concluding articles in this number are a paper on "The Political Situation in Russia," by Isaac A. Hourwich, and a criticism of Herbert Paul's

book on Matthew Arnold, by Prof. W. P. Trent.

From no other periodical can so sane and accurate a view of current politics be gained as from the Review of Reviews. The October number of that publication is noteworthy for its very clear and full editorial exposition of the issues involved in this fall's campaign, the effect of Speaker Henderson's retirement, the meaning of the tariff agitation in the Middle West, and President Roosevelt's attitude on the trust question. The President's remarkable speaking tours through New England, in the South, and to the West as far as Indianapolis,—where an abrupt ending was necessitated by the abscess on the President's leg,—are described and pictured for the reader more comprehensively than in most daily or weekly journals. In fact, this record of the year's campaigning up to date is something unique in our periodical literature. It includes a survey of State political activities, East, West, North and South. Neither Josiah Quincy's conservative leadership of the Massachusetts Democrats nor Tom Johnson's capture of the Ohio Democratic organization, on behalf of the ex-Bryan radicals, is ignored. The editor of the Review has added another chapter to the unequalled "History of Our Own Times" that he is writing month by month.

Lippincott's Magazine for October contains a complete novel and many short stories. The novel, by Mary Moss, is entitled "Fruit Out of Season." It is fresh, clever, and witty, and the reader is bound to ask himself, "Should Virginia Dryden, of thirty, had acted differently?" or, "Did Jack McCall, of twenty-one, make a fool of himself?" Some of us have known similar cases and can draw inferences. Miss Moss has a happy way of plunging into the story she has to tell at the first page, without a tiresome introduction, and the interest thus caught is held unbroken to the last word.

ABSTRACTS of the Leading Articles of the Month.

The Etiology of Infantile Paralysis.

Gassage in the American Journal of the Medical Sciences, describes two cases occurring in a brother and sister, aged seven and five years respectively illustrate the epidemic form of the disease. The boy was attacked seven days after the girl.

Clinical records are strongly in favor of several definite diseases being included under the term anterior poliomyelitis: That

class where the paralysis comes on suddenly without previous ill-health; that in which general symptoms (fever, vomiting, pain in the back) precede the paralysis; the epidemic class; and the adult class. The three latter may possibly be the same disease which may occur sporadically or epidemically. A purely vascular lesion as the cause of the disease is improbable. The one definite fact obtainable from the post-mortem examination of patients who have suffered from anterior poliomyelitis is that in all recent cases there are signs of a local inflammation in the ventral horns. This local inflammation is probably caused by a specific microorganism which has not yet been isolated. The reputed association with the acute specific fevers would be better explained by supposing that there is weakened resistance to the attack of other organisms left after these complaints.

The Congenital Factor in Hernia.

Russell in the London Lancet says that oblique inguinal hernia is always due to the presence of a congenital sac which in the vast majority of cases is furnished by a patency of the whole or part of the processus vaginalis. There is no evidence of the existence of congenital weakness of the abdominal wall as a contributory factor. If the sac is extirpated the hernia does not return.

Of 115 cases of hernia in childhood treated by the writer's operation but two have undergone recurrence for which the original condition and intervention were not at all responsible.

To the views above stated, which have been upheld by the author in earlier writings, and which were at first believed to obtain in children only, another is here-with added to the effect that the appearance of hernia in adult life may depend equally upon the presence of this congenital sac.

A Case of Severe Anemia with Enlargement of the Spleen in an Infant.

Churchill in The Chicago Medical Recorder describes a patient two and a half years old, rachitic and delicate, weighing sixteen pounds and ten ounces. She was emaciated, had slight enlargement of the cervical lymph nodes, a distended abdomen, some edema of the feet and an enlarged spleen. The urine contained hyaline casts but no albumin. There were 2,106,000 red blood cells at the first examination and only 860,400 three weeks later. The number of leukocytes varied from 18,800 to 25,400, with the neutrophiles in greatest numbers. Normoblasts were present. There was obstinate diarrhea and death was due to pneumonia one month after observation began.

He considers the case one of anemia infantum pseudo-leukemia, caused by rachitis with obstinate gastrointestinal disturbance, the effects of malnutrition being felt especially in the blood-making organs. It illustrates what marked changes we may get in the blood of infancy as the result of extreme malnutrition, anemia infantum pseudo-leukemia being a secondary anemia.

Paratyphoid Fever.

Johnston in the American Journal of Medical Sciences, August, 1902 mentions 4 cases of para-typhoid fever, in 2 of which a para-typhoid bacillus was isolated from the blood, while in the remaining 2 the diagnosis was based upon the ability of the patients' serums to agglutinate Gwyn's "paracolon" bacillus and the organisms isolated from the other 2 cases. Widal's reaction was negative in all. From an analysis of all reported cases from Paris, Germany, United States, and the Philippine Islands, the greater number have occurred between July and November, the disease most frequently affecting young adults, and males more than females in the proportion of about 3 to 1. The temperature charts are generally those of typhoid fever, though in 2 cases the initial rise was rapid, preceded in one instance by two or three days of sub-normal temperature; while in a few others marked remissions and irregularities, unassociated with the severity of the attack or with complications, and in three instances a termination by crisis, were noticed. Relapses generally terminating by crisis, and of shorter duration than the initial attack, occasionally occurred. The pulse was slow and regular, with frequently acceleration towards the end of the disease, and decrotism was present in one-third of those cases in which the tension was recorded. In more than half the cases, rose spots, varying from a few on the chest and abdomen to an extensive exanthem, were present and the spleen was enlarged. The onset was generally gradual, with headache, anorexia, general *malaise*, slight bronchitis, and occasionally abdominal pain with (in 41 per cent.) diarrhoea, which latter occurred during some portion of the illness in 62 per cent., and albumen was present in a little more than half the cases. Of complications a purulent monarticular arthritis, myositis of the deltoid, femoral phlebitis, intestinal haemorrhage, cystitis, furnaces, and broncho-pneumonia are recorded as occurring in a few instances. The days of the disease on which the paratyphoid bacilli have been isolated from the blood, and the date of their appearance in the urine, etc., are similar to the results obtained in typhoid fever. Negative results were almost

invariably obtained upon testing the serum of typhoid patients negative to Widal's reaction with paratyphoid organisms, except in four reported cases, and it is concluded that, while there is a type of disease due to infection with paratyphoid, every instance of the latter giving negative results with Widal's reaction is not due to paratyphoid infection. Diarrhoea and termination by crisis occur more frequently than in typhoid, while myositis and purulent arthritis (rare in typhoid) have been recorded as complications. The disease is usually mild and seldom fatal, and, though occurring in similar localities to typhoid, is comparatively rare, and the absence of intestinal ulceration may prove to be one of its distinctive features.

Inequality of the Pupils in Thoracic Aneurism.

Wall and Walker in the *Lancet*, July 12, 1902 presents the following summary and conclusions in this matter: A.—The explanation which ascribes the anisocoria at times occurring in cases of thoracic aneurism to interference with the sympathetic is unsatisfactory. 1. On anatomical grounds (a) Because in the majority of cases there is no evidence of implication of that portion of the sympathetic nerve-trunk containing pupil dilator fibres; (b) because it is not established that sympathetic filaments supply to sac-wall of an aneurism. 2. On physiological grounds: (a) Because the explanation supposes that the same conditions may produce sometimes paralysis of the nerve; (b) because cases are rare in which there is any evidence apart from the pupillary change that the sympathetic is involved; (c) because the pupillary changes are not those met with in cases where the sympathetic is involved. B.—1. Alterations in vascular conditions may be associated with alterations in the size of the pupils. (a) High arterial tension is associated with small pupils; (b) low arterial tension is associated with large pupils. 2. The physical explanation is probably to be found in the spiral structure of the vessels of the iris. C.—Local inequalities of blood-pressure may therefore be associated with inequalities of the pupils. (a) Clinical evidence: 1. Enlargement of pupils is frequently associated with diminution of the temporal and radial pulses on the same side of the body. 2. Obstruction of the carotid artery on one side of the neck is associated with enlargement of the pupils on both sides owing to the freedom of circulation at the base of the brain. 2. Injection of water into the carotid artery of a dead rabbit causes narrowing of the pupil upon the same side. 3. Digital compres-

sion of the carotid artery in the human subject is associated with enlargement of the pupil upon the same side. They therefore conclude that inequality of the pupils associated with thoracic aneurism is usually due to inequality of blood-pressure in the ophthalmic arteries resulting from the abdominal vascular conditions.

Tetanus and Vaccination: An Analytical Study of Ninety-Five Cases of This Rare Complication.

Joseph McFarland (Journal of Medical Research) concludes:

1. Tetanus is not a frequent complication of vaccination, a total of ninety-five cases having been collected.
2. The number of cases recently observed is out of all proportion to what has been observed heretofore.
3. The cases are chiefly American and occur scattered throughout the eastern United States and Canada.
4. They have to do with atmospheric, telluric or seasonal conditions.
5. They occur in small numbers after the use of various viruses.
6. An overwhelming portion has been observed after the use of a particular virus.
7. The tetanus organism may be present in the virus in small numbers, being derived from the manure and hay.
8. Occasionally the number of bacilli becomes greater than usual through carelessness or accident.
9. The future avoidance of the complication is to be sought for in greater care in the preparation of the vaccine virus.

Detachment of the Auricle for the Removal of Foreign Bodies in the Ear.

Ball (*Interstate Medical Journ.*, August) describes a case of a man fifty-two years old, strong and healthy looking, had for three years past had frequent pain and inflammation with occasional discharge of pus from the left ear; also pain in the ear on mastication. Ten years previously he had had purulent otitis media of the right ear, which had disappeared without leaving any ill effects. On examination of the left ear, the watch was heard at three feet, the tuning fork showed the auditory nerve unimpaired. There was a thin purulent discharge which escaped from beneath a black mass completely occluding the auditory canal, except at the lower anterior part, and situated about 10 mm. in front of the membrana tympani. The mass resounded like metal to the touch. Tyrell's hook and other measures failed to stir it.

An incision three inches and a half in length was made posteriorly to the auricle. The periosteum was separated from the posterior part of the osseous canal and the

auricle detached. A black body was found firmly wedged into the soft parts and lying almost at right angles to the auditory canal. This mass was seized with artery forceps and pulled out, considerable force being required for its extraction. It proved to be part of a knife blade, fifteen-sixteenths of an inch long, seven-sixteenths broad and one-sixteenth thick at its base. The auricle was replaced, catgut sutures being used, and a gauze tampon inserted into the auditory canal. Healing was uneventful.

On showing the specimen to the patient he stated that twenty years ago, during a fight, he was stabbed with a pocket-knife. Careful examination showed a small scar situated above and in front of the external auditory meatus. The patient said that the knife was of ordinary size—i. e., its blade was about two inches and a half in length—and that the surgeon who attended him regarded the wound as trivial and did not explore it. Evidently the foreign body was a migrant.

Changes in Treatment of Hip-Disease.

G. A. Wright (Practitioner, July, 1902) shows that the changes in the line of treatment of this condition have been improvements in the general management of wounds rather than alterations in the principles which underlie the treatment of joint disease. There were then as now advocates and opponents of excision. The supporters of the operative treatment founded their views on the principle of removing a tuberculous focus, getting rid of dead bone, and so cutting short the disease. The chief arguments against excision were the dangers of wound infection and the alleged inferiority of stability and usefulness of the limb. The abolition of drainage and complete closure of the wound, so as to obtain primary union and get rid of the dangers of mixed infection, was the next great advance, and a further step was taken when in case of "abscess" the operation was divided into two stages. In the first the "abscess" was laid freely open and thoroughly cleaned out, or even excised, and when this had healed the diseased bone was removed if necessary. This led to fewer excisions, for when the "abscess" was healed it was frequently found that nature took care of the bone lesion. The use of iodoform in open operations and also as an injection has undoubtedly been helpful, and combined with extension it is employed in Holland almost to the exclusion of other methods. Rest, extension and fixation by splints or traction apparatus are still the methods in early cases and the better results obtained are probably due to the greater care taken and the fact that the cases are seen and treated

earlier. Later follow extirpation of "abscesses," or in some cases aspiration and injection with iodoform, excision where the disease is progressive in spite of treatment, and amputation when a useless limb and pelvic disease render recovery hopeless. These constitute the main features of the present-day treatment.

Cases of Prostatectomy. With Remarks on the Operation.

Paul Thorndike (Boston Medical and Surgical Journal, August 28th) says (1) That great relief can be given to all patients suffering from symptoms due to obstructing enlargement of the prostate, either by palliative or by operative means. (2) That the time to resort to operative measures is just as soon as palliative treatment carefully executed by competent hands has failed to give relief. (3) That complete prostatectomy is always the operation of choice, because it is the only operative procedure which cures or gives uniformly good results, when properly performed in proper cases. (4) That the best time for its performance is just as soon as palliative efforts have failed or are manifestly impossible of execution, and before secondary changes in the bladder and kidneys, due to long continued obstruction, have taken place. (5) That in those cases which come for surgical relief so late in the development of the pathological conditions that the bladder and kidneys are extensively diseased and the patient is manifestly exhausted by long continued suffering, other less certain and perhaps less severe measures may be advised, instead of a complete prostatectomy; but that such a decision can only be, and must always be, made by the surgeon for the individual case.

Typhoid Psychoses.

Farrar (American Journal of Insanity) says that typhoid fever attacking the sane person may leave him free of psychic disturbance or may give rise to all gradations of mental disease. That the severity of the symptoms do not necessarily stand in relation to the height of the fever or the severity of the infection and that subjects of Psychopathic heredity are more prone to alienation, especially initial delirium, than those not thus burdened; that a protracted exhausting fever predisposes to an asthenic psychosis; that a second or third attack of typhoid is more likely to present mental trouble than the first. Of the special disease types the initial delirium is the rarest form, has the most rapid course and worst prognosis, over 50 per cent. ending fatally. It is essentially the expression of severe intoxication. The Nissl findings confirm this

view. It often causes errors in the diagnosis and any case of mental derangement with fever justifies the suspicion of typhoid. The febrile psychoses are, of course, of the greatest frequency and afford the best outlook; that 25 per cent., however, persist for varying lengths of time into or after convalescence, and are especially due to the elevation of temperature and its consequences. The asthenic psychoses (excepting *conceptions*, *delirantes isolees*, and cases of typical collapse delirium), have long weary courses and a doubtful outlook, with evidences of serious cerebral changes. They develop on a basis of exhaustion, anemia and malnutrition. There is moreover, a post-typhoid predisposition (irritable weakness) which may develop late psychoses, with dubious prognosis. As a result of the metabolic revolution accompanying severe infections, it is observed that an attack of typhoid has been followed in many instances of so-called recoverable psychoses, by temporary improvement or recovery. The writer says that neither in their clinical or anatomical picture are typhoid psychoses distinguishable; that the elements of intoxication, infection, temperature, exhaustion, anemia, or whatever origin, may produce similar or indistinguishable appearances and that the determining factor of susceptibility to mental disorder, as well as of the course and event, may be expressed in a word as the mental reaction coefficient of the individual, together with its physical basis.

Spinal Tuberculosis.

Hunkin (Occidental Medical Times, August, 1902) considers: 1, rest to the weight-carrying function of the bone, which can best be obtained in the recumbent position and supine decubitus, and 2, that traction, alone or with counter-traction, is unnecessary and with disease in the lumbar, dorso-lumbar and cervical regions positively harmful except for the attendant immobilization. The best effects are produced by leverage on some such plan as the curved stretcher splint he employs. After the active stage has passed, the child can be up and out with the spine fixed and superincumbent weight removed with proper apparatus, not always consisting of plaster-of-paris jackets with suspension sling, but varying with the location of the lesion. The apparatus are to be considered and used solely as levers that have the fulcrum between the two points of force; the important matter is that they should be light, easily handled and capable of giving rigid support. In the lumbar and dorso-lumbar regions efficient appliances are possible. In the lower dorsal it is better and in the mid-

dorsal region imperative that suspension be discarded, and some plan of applying the corset or brace in the hyper-extended position be adopted. In the upper dorsal region, on account of the difficulty of getting sufficient leverage, the treatment is not yet satisfactory and he is still working out the problem for each individual case, keeping the child recumbent for a longer period, and later using some head support projected from some form of steel or plaster which is fixed on the trunk. In the cervical region many of the head-carriage apparatus are satisfactory and give good results.

Dilatation of the Cervix by the Metranoikter of Schatz.

Daniel (Journal of Ob. and Gynecol. of the British Empire, Sept., 1902) concludes a valuable paper with the following summary:

1. The metranoikter of Schatz does not pretend to supersede the other methods of dilatation. But it is not only equal to the older ones, but also superior to them in many cases.

2. The main conditions for which the metroikter proves to be most useful are—

(a) Cases of abortion where portions of the ovum have already been retained for some time.

(b) Hæmorrhage from the uterus in cases where there is no fresh abortion, the reason of which has to be found out through digital exploration of the uterine canal, or digital or instrumental denudation of the inside of the uterus.

3. It *cannot* be recommended in cases of recent abortion, especially with private patients, as these, after the introduction of the instrument, must be kept under constant control. In any such cases, therefore, laminaria or tupelo tents or iodoform gauze must be preferred.

4. It *must* be recommended and preferred to any other mode of treatment if inflammatory processes take place either in the uterus itself or in its surroundings.

Anyhow, the metranoikter of Schatz deserves to be more tried and appreciated than has hitherto been its lot, and all the more because there are cases also in obstetrics where of late a quick dilatation of the cervix by means of instruments (Bossi Leopold) is considered to be advisable. It therefore does seem very likely to us that also in these—eclampsia, for instance—our method, after the instrument has perhaps been altered to suit its new purpose, may prove to be of great value to the obstetrician.

Deep Transverse Arrest of the Head as an Indication for Forceps.

Reed: (*Annals of Gynæcology and Peditry*) points out that this condition is relatively common complication of labour. Very few authors have considered it worthy of notice, and, if at all, it is generally described and dismissed in the text-books in a few lines as a variety of occipito-posterior position. Ahlfeld found thirty-eight cases in 3,000 labours (1.26 per cent.), which is only a slightly less frequency than all occipito-posterior positions (1.5 per cent.). Torgler reports forty-eight cases, representing a frequency of 1.5 per cent. in his service. In the last 3,600 labours at the Chicago Lying-in Hospital, the condition has been recognized thirty-four times (nearly 1 per cent.).

The diagnosis is easily made from the position of sagittal suture, which is parallel with the transverse diameter of the inlet, and from the two fontanelles being about the same level. The head is found on the perineum or a little beyond the mid-plane, and the progress of labour is arrested.

In Ahlfeld's cases, twenty-seven were primiparæ; in Torgler's primiparæ were five times as common as multiparæ, and this preponderance may be due to the early descent of the head during the last three or four weeks of pregnancy, during which period it remains more or less transverse. This unusual frequency in primiparæ is not borne out, however, by the cases of the Chicago Lying-in Hospital; here nineteen were multiparæ. The condition may occur in flat pelvis of moderate degree, generally contracted pelvis, prolapse of the arm between the head and the anterior pelvic wall, and in 47 per cent. of Ahlfeld's cases the pelves were too large either actually or relatively. Pendulous belly and delichocephalic head also favour the condition.

The dangers arise from the prolongation of labour, but as a rule the cases terminate favorably, if given time enough, by the occiput rotating forward, backward, or, as in five cases, the head being delivered in the transverse position.

When there is no necessity for immediate delivery, the woman is placed upon the side towards which the occiput points for an hour or so, this permitting the occiput to sink deeper into the pelvis. If this fails, two fingers or the half-hand may be carried in behind the posterior parietal bone, and an attempt made to assist rotation forward, and if this fails pressure may be made upward on the sinciput during a pain to secure flexion.

In most instances the normal termination of the case cannot be waited for, and if no progress occurs within two and a half

hours after complete dilatation of the os the forceps should be applied. Before the forceps are applied the location of the occiput must be determined, and the blades should then be applied in that pelvic oblique diameter toward which the occiput lies; hence, if the occiput lies to the woman's left, the forceps should be applied in the left oblique, the left blade resting on the anterior malar bone, and the right on the posterior parietal protuberance. Traction and rotation must be simultaneous, in the proportion of two of traction to one of rotation. There is danger in lacerating the vaginal walls of this manœuvre, and occasionally, in spite of every precaution, this will occur. After rotation the blades may be removed if the pains are strong. Axis-traction forceps are also found satisfactory.

Clearing Out the Tympanum as a Means of Improving the Hearing.

Gradenigo (*Journal of Laryngology*) divides his cases into four groups: (1) Scleroses; (2) chronic catarrhs; (3) post-suppurative cases showing no destructive changes, but only the objective signs of Group 2; (4) post-suppurative cases showing destructive changes.

The prognosis is best in Group 4. In Groups 2 and 3 the membrana tympani is generally thickened, dull, immovable, often retracted, and there are traces of old catarrhs in nose and throat, or adenoids, etc.

In sclerosis the membrane is thin, smooth, shining, and more movable, and there are often cases of deafness in the same family. The nose and throat are normal, except in mixed cases, which are not infrequent.

The greatest differences exist between the scleroses and the destructive suppurative cases. In both there is interference with air-conduction and defective hearing of low-pitched notes but in scleroses there is also defective hearing of high-pitched notes, the internal ear being affected, which is not generally the case in destructive suppurative cases.

In the catarrhal and suppurative cases without perforation (Groups 2 and 3) much depends upon the stage of the disease. In old catarrhal cases one may find the preception of high-pitched sounds (*i. e.*, the internal ear) more affected than in early sclerosis.

Nine cases in all were operated upon. Two cases of sclerosis were distinctly benefited both as regards hearing-power and tinnitus when examined fourteen months after operation. One of the cases was a very bad one of thirty years' duration.

Of three cases of chronic catarrh, one showed at first enormous improvement, but the ultimate results were negative. The

wound suppurated and the membrane was rapidly regenerated. The second case gave a negative result; and the third, after showing some temporary improvement, with great variations in hearing-power, finally relapsed, and was rather worse than before operation.

Of the post-suppurative non-destructive cases (Group 3) one gave a good result, the patient being enabled to resume her employment as a domestic servant. The immediate success in this case was brilliant, and even the ultimate result was good, especially in one ear, from which nearly the whole of the stapes was removed. The membrana tympani was regenerated on both sides.

He concludes (1) The more complete the integrity of the internal ear the better the hope of success.

(2) The best results are obtained in post-suppurative cases with partial destruction of membrane and ossicles. Good results are also obtained in a little-known class of post-suppurative cases which show no traces of destructive change, but in which there is a clear history of suppuration.

(3) In the dry forms of middle-ear disease results are not so good; curiously enough, they are more favourable in sclerosis than in chronic catarrhs, in spite of the fact that the internal ear is more frequently affected in the former condition. This may be explained by the fact that in sclerosis the membrana tympani is atrophied and less apt to be replaced by a cicatrix, so that the labyrinth remains more accessible to sound waves. In catarrhal cases a cicatricial membrane generally soon forms.

(4) The treatment of the wound after operation is most important, especially the avoidance of sepsis.

(5) Marked labyrinthine symptoms contra-indicate operation.

Is Craniotomy Ever Justifiable?

Krusen (International Medical Magazine, August, 1902) makes the statement that in these days of advanced obstetric surgery embryotomy has a very limited field, and the satisfactory results secured by cesarean section and symphysiotomy, or by the induction of premature labor, have narrowed the field of craniotomy until it is rarely indicated. The fact that the mortality of the cesarean operation when performed early, and not as a *dernier resort*, has been reduced to less than 10% and that from 90% to 95% of the children are saved, must influence the choice of procedure. In the minor forms of dystocia the choice will probably lie between craniotomy and symphysiotomy, or the induction of premature labor; and if the practice of pelvimetry

were more prevalent among all practitioners, the latter procedure would often render unnecessary the more serious obstetric operations. In towns and cities with well-equipped hospitals, with skilled surgeons within call, and with the facilities for performing operations which may save both lives at hand, craniotomy is never justifiable. But in country practice where these things are not available the case is very different, and as the interests of the mother must always take precedence over those of the unborn child, craniotomy may become the proper procedure; for there is little doubt that if cesarean section or symphysiotomy were attempted by an untrained physician with incompetent assistants, two lives instead of one would almost surely be sacrificed. As in many other difficult problems, the decisions must be made upon the merits of each individual case.

Some Errors in Diagnosis in Conditions Resembling Appendicitis.

Brewer (Annals of Surgery), says that renal calculi may produce pain, simulating that produced by lesions of the appendix or the biliary passages, and are often unaccompanied by classical signs such as haematuria, vesical irritation, and tenderness in the lumbar region. Occasionally small stones may be overlooked after inspection and palpation of a kidney through a lumbar incision. Cysts of the right ovary or parovarian, when strangulated by a twisted pedicle, may often present symptoms which closely simulate an acute appendicitis. A twisted hydrosalpinx may simulate the same disease.

It is well known that cholecystitis and appendicitis are extremely hard to differentiate. The negative results of palpation of the region of the pancreas through the walls of the stomach or the tissues of the omentum by no means exclude an acute suppurative process in that organ; the presence of small, white areas of fat necrosis generally distributed over the peritoneal surfaces should immediately direct our attention to the pancreas, and also that the local condition or the general sepsis caused by this lesion may give rise to symptoms and signs strongly simulating those produced by a general infection of the greater peritoneal sac. A rapidly growing sarcoma of the small intestine is often mistaken for acute appendicitis, and in the early stages of their development these growths produce no obstruction, and often gives rise to no discomfort. Severe general sepsis, from infected foci entirely removed from the abdominal cavity, may often give rise to symptoms and signs identical with those produced by a local or general peritonitis.

The Abuse of Hypnotics.

The Medical Press and Circular says that one of the pitfalls for a young practitioner is the use of hypnotics. He commences confident in his power of curing pain. All around him he finds sedatives and hypnotics. To the list of the old narcotics which exercised Harley's classic pen is added the abundant supply of the synthetic class of chemicals. And yet how powerless the practitioner feels at the bedside of a maniacal patient for whom sleep is a necessity of life. Then for the first time perhaps he finds the truth of Sydenham's advice, "prescribe for the patient." The high fever, the staring eyes, the wild mutterings are indications not for the ordinary hypnotics old or new, but for the administration of some therapeutic agent to lessen the frequency of the pulse, to lower temperature, to abate the violent headache, and induce natural sleep. For such cases hypnotics are of no use. The disturbed action of the heart must be corrected, the arterial tension diminished, the skin made to act. The choice of the prescriber lies between aconite and green hellebore, and the dose should be small and repeated every five minutes until the effect of the drug is seen. Of aconite, two-drop doses repeated for twelve or even twenty times. When prescribing green hellebore, Norwood's tincture may be given in one-drop doses until the patient vomits or the physiological effects are produced. The action is similar to that produced by the antimony draught of Graves, which we have lost the art of prescribing.

Diagnosis and Prognosis.

The progress which sciences germane to medicine have made during the last half century is remarkable. Diagnosis has become far more exact than was possible when so little was known with regard to the correlation of groups of symptoms and pathological changes. The Medical Press and Circular believes that we owe this advance in great part to the encroachment of the surgeon on fields previously regarded as exclusively medical, his ante-mortem examinations having thrown a flood of light on associations which were previously merely suspected. The greater perfection of the instruments which enable us to obtain precise knowledge in regard to organs and tissues which are hidden from sight and are with difficulty accessible to ordinary methods of exploration has also conferred upon diagnosis the precision which is indispensable to accuracy and deduction. In the matter of diagnosis the physician is on tolerably sure ground, and although, since the personal equation can never be ignored, mistakes are possible, they are for the most part attributable to want of care or inability

to appreciate the significance of data. So far, the physician is on fairly solid ground, but it is quite otherwise when he ventures to forecast even the near future. Here he is reasoning from the known to the unknown, and, metaphorically speaking, he has only one foot on the ground. The most experienced physician, when he formulates a prognosis in a given case, can but enunciate the doctrine he is doomed in a certain proportion of cases to fall into error. Yet after the initial question which every patient addresses to his medical adviser, "What is going to happen?" and the question is one which it behooves the practitioner to answer with the greatest prudence. No physician is long in practice before he discovers that, as Voltaire once observed, nothing happens but the unexpected; the most trivial affections, in apparently robust patients, end disastrously, while others, obviously more severe, recover. The old physician who said he never acknowledged that a patient was dying until he was dead, was at any rate on the safe side, and much might be urged in favor of this attitude, which is in every way preferable to that of the pessimistic physician who ruthlessly declares the case to be hopeless from the onset. Such an attitude, even if justified by events, has the incontrovertible drawback of depressing the patient and discouraging those in attendance upon him. The physician ought to be a man of sanguine temperament in the matter of prognosis. Bearing in mind the large number of factors which must necessarily escape his observation, he will take care to temper the optimistic character of his utterances to the patient by more guarded remarks to the friends. Symptoms and signs tell what is, not what will be, and the physician must cultivate the faculty of never being surprised at anything, but of quietly expecting everything. Room must always be left for the chapter of accidents, and in medicine death is the accident. To foretell the duration of a labor is like foretelling the arrival of a ship in port without knowing at what speed it will travel or what route it will follow. The only thing to say is that the vessel will reach the port eventually if nothing intervenes to hinder its course. What more can be said and what more can be expected? Prognosis cannot be an exact science, since we are never in possession of the data which are indispensable to a trustworthy forecast.

Electrical Anaesthesia.

At the last meeting of the French Academy of Sciences, M. Leduc, according to the Medical Press and Circular, called attention to an ingenious method of inducing anaesthesia by means of the electric current

which may possibly prove of service in respect of human beings, although, so far, it has only been tried experimentally on animals. The constant current is applied to the shaved head of the animal through an interruptor giving from 150 to 200 breaks a minute. The electromotive force is gradually but quickly increased until the body is thrown into a state of tonic contraction, when the animal falls down and respiration is suspended. The current is then reduced until respiration is restored, and at this stage the animal is in a state of quiet narcosis, cerebral activity being entirely suspended. This unconscious state can be maintained for at least two hours without injury, and consciousness returns as soon as the current is cut off. Not only has the experiment no injurious effect, but the animals were often particularly lively as if under the influence of a stimulant. When applied in the manner indicated, that is to say, quickly, the sensation, as far as one could judge, was not disagreeable, but when, on the contrary, the strength of the current was increased very gradually the animal passed through a period of clonic spasm. The current recommended is one of from 12 to 20 volts with 1 to 10 milliamperes intensity, and about 200 interruptions per minutes. By this means, moreover, perfect anæsthesia of the region innervated by a particular nerve trunk can be painlessly obtained.

Tetanus After Laparotomy.

Coe (American Journal Obstetrics) reports two cases of tetanus which occurred in the General Memorial Hospital, New York, at eighteen months' interval; there was no assignable cause. The hospital was opened in 1887, and the conditions are very aseptic; in both cases the operations were "clean," and both were in the author's wards. The first operation was the removal of a double salpingitis with cystic ovaries. There were no complications at the operation; convalescence was without fever. Stiffness of the neck was felt on the twenty-first day, trismus next day. Death occurred on the thirty-sixth day; serum injections proved unavailing. The second patient underwent panhysterectomy for fibroid uterus and diseased tubes. She did well until the ninth day, when stiffness of the jaw set in; on the tenth day she could not swallow; fifty cubic centimeters of serum were injected into the veins; general convulsions occurred the night afterward; a second injection was made; death occurred on the eleventh day. Both patients were hysterical, so that diagnosis was obscure at first.

Present Status of the Pessary.

F. H. Davenport (Bost. Med. and Surg. Jour. August 7, 1902) believes that it ought not be entirely disregarded, and now that the indications for its use are better understood and are on a more scientific basis its former position is being partially regained. He says that in uncomplicated cases in young women who have not had treatment operation should be advised. Operation also is the only method which holds out prospects of a cure in cases complicated with lacerations, enlarged uterus, or much prolapse. Otherwise, where the uterus is small, where symptoms have been present but a short time, and particularly if they are associated with neurasthenia, treatment by pessary will often result in a cure. In such selected cases cure may be expected in one-half. Even in cases where a cure cannot be hoped for by pessary its temporary use is often of value in relieving symptoms and in aiding to restore the general health.

Goose Grease in Ringworm.

Jackson (Med. Age) uses the crystals of iodine, one-half to one dram, rubbed up in goose grease, one ounce, and directs that the ointment be thoroughly worked into the patches by means of a stencil or stiff paint brush. His success has been especially marked in curing ringworm of the beard. Under the microscope hairs show staining down to the bottom of their roots. On the scalp of a child it does not seem to be very irritating, and the patches get well.

The greatest difficulty in the way of using goose grease is in getting it. The best quality of the article is very expensive, as it is made from the fat taken from a dead but uncooked goose, which spoils it for cooking, and so a few ounces of fat costs as much as the whole goose. * * * Some perfume may be added to make it pleasant to use.

Scarlatina Hemorrhagica.

V. C. de Boinville in the London Lancet for August 9, 1902, mentions a boy aged four and a half years, who was admitted June 21, 1902, and according to the mother's statement he fell ill June 16. The admission thus took place on the sixth day after the onset of the disease, which was characterized by the usual malaise, headache, sore throat, cough, and pain in the chest, rapidly followed by a diffuse scarlet rash. On admission this rash was still visible, but was fading and the fauces and throat generally were congested and foul. During the 24 hours following admission the temperature ranged from 101 to 102.4 deg. F., falling gradually in the course of the next six days to 99.6 deg. on the 27th. On the evening of this day, the twelfth

from the onset of the disease, it rapidly rose to 103 deg., when grain doses of sulphate of quinine were administered every four hours. The temperature then again fell, reaching normal on the 1st of July. So far the case assumed a not unusual course. The patient during this period of observation was pale and rather weak; the pulse was somewhat feeble, but there was no reason to expect anything but a favorable recovery. The cervical glands were not swollen. There was neither thus far nor subsequently any albumin or blood detected in the urine. On July 2, however (and this is the special point in the case), just as desquamation was setting in, bleeding from the anterior nares commenced. Hemorrhagic spots, a dozen or so, measuring about three mm, in diameter, appeared on the anterior aspect of the scalp. Similar spots presented themselves in the neighborhood of the knee-joints. The evening temperature rose to 99.6 deg., and the patient became generally feeble; in fact, showed a tendency to collapse. Perchloride of iron applied as a styptic to the nose only partially checked the hemorrhage during its actual application. On the following day an eczematous rash appeared on the buttocks, and the spots thus formed bled on the slightest friction. Tincture of hamamelis was no more successful than the former styptic in allaying the obstinate epistaxis. Iron was administered internally, and brandy was cautiously exhibited. Posturing and other methods were of no avail in checking the bleeding. It must be remarked that the total quantity of blood lost was very small. The cause of anxiety was the symptoms *per se*, suggesting a markedly impoverished or poisoned state of the blood, not an actual loss in quantity. Desquamation, which had commenced on the hands and feet, became entirely arrested. The patient grew progressively weaker and the temperature rose higher—never above 103.2 deg., however, which it reached July 6. Tepid sponging was now employed. On the 7th, at 3 A. M., the thermometer recorded 103 deg. Tepid sponging was again resorted to, causing the temperature to fall to 98.9 deg. At 10.30 A. M. the patient vomited, the vomit containing a little unaltered blood. At 11 A. M. he died in a state of collapse. The interesting feature is that the hemorrhagic symptoms did not appear at the onset of the disease, as in an ordinary case of scarlatina hemorrhagica but at a period when convalescence was to be expected. In other words, a profound toxemia set in at a time when it was to be supposed that antitoxin in the ordinary course of events would be forming and immunity becoming established. Can it be

that nature, as it were, surpassed herself in her process of healing, that the antitoxins had become excessive, and that a "reactionary antitoxemia," if one may use such a term, had set in? Or can it be that, after the supposed toxins had been sufficiently eliminated to permit of a fall of temperature and partial recovery, a fresh supply of toxins hitherto combined with other material, or otherwise rendered inert, and suddenly been let loose in the blood and set up a secondary toxemia?

Ethyl Bromid.

Kelly, according to the British Medical Journal, Aug. 30, 1902, has used Ethyl Bromid 1200 times in tonsillotomy and operations for adenoids, polyps, etc., almost all in young persons or children. Kelly insists on attention to the respiration during the administration, not prolonging the operation by repeating the dose over twice or thrice, and the use of a pure article. Its advantages are enumerated as follows: "No special apparatus is needed for its administration, narcosis is rapidly produced, the vapor does not irritate the respiratory mucous membrane, the upright position of the patient is permissible, there is quick return to consciousness, the after-effects (vomiting excepted) are unimportant or nil, and the danger is insignificant. * * Another advantage which will commend itself to those who can not always obtain the services of a skilled anesthetist is that the administration can be superintended by the operator, who, sitting facing the patient, is in the best position to note the progress of the narcosis. As a time-saving agent bromid of ethyl is invaluable in dispensary practice. I have often operated on six or seven patients in forty or fifty minutes, and with organized assistance a dozen cases might be undertaken in an hour, as is accomplished by De Roaldes." Its disadvantages are the frequent impurities and the instability of the drug, the persistence of muscle tonus and the rather frequent after-vomiting. In adults the occasional after-excitement is also a disadvantage. Kelly says, however: "By virtue of its safety and convenience bromid of ethyl is entitled to a place among the anesthetics in daily use. Its position is between nitrous oxid and chloroform, ether, etc. Although handier than nitrous oxid, the latter, on account of its almost absolute safety, should be preferred when very brief anesthesia will suffice. On the other hand, chloroform, ether or one of the various mixed anesthetics should be resorted to when prolonged narcosis is necessary. A single administration of bromid of ethyl gives anesthesia lasting on an average a minute and a half, and this in conjunc-

tion with other qualities of the drug render it, I believe, the best anesthetic we at present possess for the removal of tonsils and adenoids."

The Causes which Prevent the Restoration of Normal Valve Function in Rheumatic Endocarditis.

R. Caton (Lancet, August 23rd, 1902) states that in acute articular rheumatism, no matter how severe the joint lesions may be, yet in most cases, and under the proper treatment, the joints are restored to their normal condition. The reason why a like restoration of the endocardium does not take place when the heart is attacked in rheumatism, is undoubtedly found in the fact that joints can rest; the merciful influence of pain automatically ensures repose for each affected joint. Rheumatic inflammation of the valve cups usually does not cause any pain, but whether there is pain or not, the toiling heart must go on. In fact the joint pain and fever augment and accelerate ventricular effort, thus increasing the peril of the heart. So that the salicyl compounds, in allaying pain and fever, have an important indirect beneficial effect upon valvulitis.

The principal of treatment of beginning endocarditis advocated by the author, is to give the heart the greatest amount of rest that is practicable. Pain and fever are subdued as rapidly as possible, absolute quiet is enjoined, no excitement is permitted, and a light nonstimulating diet given.

Slow ventricular contraction, low vascular tension—in fact a minimum of work—is essential if the inflamed and thickened endocardium is to be restored to its normal condition. Other methods of less importance are also employed: (1) gentle blistering of the skin; and (2) the administration of moderate doses of sodium iodide.

He reports four illustrative cases. The first two show the evil effect of too early a return to muscular activity and higher blood-pressures during convalescence from valvulitis; the third shows the disastrous influence of rapid heart action and dyspnea on coincident valvulitis; and the fourth exemplifies the evil result of mental agitation on a subsiding endocarditis, even though absolute rest of trunk and limb be maintained.

Asphyxia In the Newborn.

De Lee (International Medical Magazine, August 1902) says that the most reliable sign of asphyxia before birth is in the fetal heart-tone, changes in frequency and quality. A steady slowing to 100 per minute, and certainly if below this, points to impending danger, and after this an increase to 160 or more, usually occurring after the

diminution has been pronounced, implies death from vagus paralysis. If the quickening is primary it should have the same significance as slowing. Next in importance is the passage of fresh meconium with the liquid amni. The discharge of mæconium is analogous to the involuntary bowel movements that occur in other asphyxias, as drowning and strangling. Still another sign showing that asphyxia has already become serious, is feeling, seeing or hearing respiratory movements made by the child before complete birth. The prophylaxis is important. The waters should not be ruptured unnecessarily as the child is generally safe in an intact sac. Ergot should not be given during labor. No attempts should be made to hasten birth, especially in breech presentations. The fetal heart-tones should be carefully studied, especially toward the end of the second stage. The physician should be prepared to treat the accident. If the danger should be diagnosed *in utero* labor should be expedited as far as possible for the safety of the mother. If the child should die during its delivery leave the rest to nature, or, if operation is necessary, do embryotomy. After the child is born one must determine instantly whether the asphyxia is mild or severe. The child may be in a condition of apnea which may resemble mild asphyxiation, this condition being especially common in Cesarean sections. In mild asphyxia the child is rigid, blue, with turgid lids, slight exophthalmos, its pharynx and trachea are full of mucus, so that when it gasps no air can get into the lungs. The throat reacts to the finger. In severe asphyxia the extremities hang down, the surface is pale, the jaw falls, or is jerked by an occasional gasp, the throat does not react to the finger, the heart beats faintly, or is only perceptible to the ear. Anemia of the fetus and compression or hemorrhage into the brain present symptoms similar to severe asphyxia, but the treatment is the same.

Morphin given the mother, especially in eclampsia, will sometimes produce narcosis in the child, which may be fatal. The three great principles governing the treatment of asphyxia, are: 1, maintain the body heat; 2, free the air passages from obstruction; 3, stimulate respiration, or supply air to the lungs for oxygenation of the blood. The writer gives details as to these and describes the apparatus for mouth insufflation and the methods of artificial respiration. One's duty is not completed in having brought an asphyxiated child to crying. It may develop a secondary asphyxia due to atelectasis pulmonum, or there may be some pulmonary circulatory trouble in

addition. When the child is partially revived one may try to expand the lungs by forced insufflations, but it should be carefully performed. There should not be too active or too persistent efforts.

The Treatment of Deafness of Middle-Ear Origin.

C. Watson (British Medical Journ., August 30th, 1902), says that the principles upon which the treatment of this affection are based, are as follows:

1. The promotion and maintenance of a more vigorous circulation in the middle-ear, with the view of (a) increasing the resisting powers of the tissues, and (b) the promoting of the absorption of morbid products where possible.

2. The maintenance of thorough aeration of the nasopharynx and middle ear.

3. The restoration of a greater degree of flexibility to the tympanic membrane and associated structures.

The method of treatment is as follows: Half a drachm of equal parts of warm rectified spirit and glycerin is instilled into the ear, and an equal quantity applied to the skin of and around the ear. This is accompanied by massage of and around the ear and intermittent pressure over the meatus. The excess or fluid is then removed and from five to ten drops of warm myelocene are dropped into the ear from a warmed pipette; and about ten to twenty drops of the oil are rubbed on outside the ear. In most cases the treatment was carried out daily. Sometimes the oil was not absorbed, and so interfered mechanically with the hearing power. The cases in which improvement may be looked for from the treatment recommended, are those in which the pathological process has apparently been arrested, as evidenced by no deterioration of the hearing power for some years. The coexistence of internal ear disease does not contraindicate the trial of this treatment. Any case that is not improved by the local application of myelocene alone and where the hearing is made worse by even a small amount of mechanical stimulation, is unfit for this mode of treatment.

Chronic Laryngitis: Correlation of Diagnosis and Treatment.

Haring, in the British Medical Journal, August 30th, 1902, says that cases of chronic laryngitis may be divided into three classes as follows:

1. Systematic, in connection with valvular disease of the heart, cirrhosis of the liver, alcoholism, gout, etc. These cases are but part of a large lesion, and little special attention need be paid to the local trouble in the larynx.

2. With nasal disease, which may act in

three ways. By extension of the catarrh by continuity of surface, by irritation from the discharges, and by mouth breathing caused by nasal obstructions. In all cases the first indication is to treat the nasal lesion thoroughly.

3. In a small number of cases the inflammation is limited to the larynx.

The cases may also be classified as to the part of the larynx most affected, as follows:

1. *Laryngitis chronica superior*. As the upper part of the larynx contains much loose tissue, inflammation of the same is accompanied by considerable swelling. The vocal chords may be quite overhung by the false cords. Applications of a fine pointed galvanocautery under cocaine and supracardial anaesthesia have given good results. This form is often difficult to diagnose from tuberculous laryngitis.

2. *Laryngitis chronica media*. When the true cords are principally affected, mild cases can be cured by resting the voice and painting with a silver solution (thirty grains to the ounce). Where the congestion is limited to the anterior portions of the cords it is advisable to give antisyphilitic remedies, even in the absence of history or other symptoms of syphilis. In singers, faulty voice production must be rectified before they again take up their vocation. Haemorrhages are not very infrequent, due to enlarged vessels on the cords. If the cords are much swollen potassium iodide should be exhibited.

3. *Laryngitis chronica inferior*. The subglottic regions are often neglected, owing to difficulty of inspection. Thorough cocaine anaesthesia of the larynx renders it easy to inspect and treat these regions, and a methodical treatment (too often neglected) of the subglottic space will assist materially in the cure of obstinate cases.

Haemorrhages During the Later Months of Pregnancy and Early Stages of Labor.

Jardine (Scottish Medical and Surgical Journal, September) mentions unavoidable haemorrhages, which arise from the separation of an abnormally situated placenta, that is, one entirely or partly attached below the retraction ring. If the first attack of bleeding occurs before the foetus has reached a viable age, palliative measures should be adopted, unless the loss is very severe. Absolute rest in bed, with perhaps an opiate and attention to the bowels and diet, is all that is to be done. Styp-tics are of no use. If the foetus has reached a viable age and the bleeding is not at all severe, prompt treatment should be adopted to check the haemorrhage and to get the uterus emptied. If the os is not dilated, or

is only slightly dilated, the vagina should be firmly plugged after it has been carefully cleaned. The cervix should be plugged first if it will allow of this. A properly inserted plug will control the hæmorrhage, but, to be effectual, it must be so packed in as to fill completely the vagina. For controlling hæmorrhage the breech of the child is the best of all plugs, so that, in cases where there is sufficient dilatation of the cervix, the leg should be brought down after bipolar version in a head or transverse case, or the leg should be hooked down in a breech case. The plug should be removed in a few hours and, as a rule, the os will be found sufficiently dilated to allow of the bringing down of a leg. Once a leg is brought down, the hæmorrhage may be checked by keeping up gentle traction.

Direct Endoscopy of the Upper Air Passages of the Oesophagus.

G. Killian (British Medical Journal, August 30th, 1902), states that the principle which underlies œsophagoscopy has recently been applied to the trachea and bronchi. An inspection can be made right down into the lungs by the introduction of straight tubes into the trachea and bronchi.

In the adult, local anæsthesia with a twenty-five per-cent. alcoholic solution of cocaine is nearly always sufficient, but a preliminary injection of morphine is of great assistance. In children it is best to give chloroform, the head hanging over the edge of the table. He does not use a "mandrin" or the finger as a guide, but introduces the instrument under the guidance of the eye, looking continuously through the tube, thus gradually finding his way through the pharynx and larynx into the trachea. Foreign bodies are thus easily discovered and extracted. If tracheotomy has been necessary and the foreign body has not been coughed up, a short tube may be introduced through the cocaineized trachea—lower direct tracheotomy. Aspirated foreign bodies are specially liable to become fixed in the bronchi. If just below the bifurcation, upper or lower direct tracheoscopy is all that is necessary for diagnosis and extraction. If deeper down, longer bronchial tubes are employed, which are introduced into the cocaineized bronchi. The bronchi are highly elastic and imbedded in soft tissue, and can without danger be pressed into the median line, thus bringing trachea, larger bronchus, and branch into one straight line.

Bronchoscopy thus allows the whole bronchial tree to be searched. Though the left principal bronchus branches off at a sharper angle, yet with gentle pressure it can be brought into view almost as easily as the right. The view must be kept clear

by sponging or by the use of the author's specially devised pump. It must be remembered that if the tube is introduced into a principal bronchus which is entirely blocked by a foreign body, respiration will at once be interfered with. Under such circumstances the tube should have a lateral opening some distance from its lower end. For the removal of foreign bodies from the bronchi a good view, great care, and quietness in procedure are essential. Slender tubular forceps, and blunt hooklets are the most useful instruments.

Hitherto, bronchoscopy has been employed in twenty cases. Nearly one-half the cases were in children. The foreign bodies had been aspirated into the bronchi within a few days in about half the cases; in the others they had been in the lung for months or years. Upper bronchoscopy was successful in nine out of eleven cases in which it was employed. Lower bronchoscopy was successful in all of nine cases. In the cases in which extraction was successful, only one patient died and that nine months later from purulent pleurisy of the affected side.

Treatment of Obesity.

Von Noorden (International Medical Magazine, August, 1902) says many nephritic patients become too stout through improper diet and show all the signs of secondary cardiac disturbance. A mixed diet poor in heat units should be prescribed in such cases, reduction of fluid taken, and advises cold rubbings; later a bath cure reducing the flesh and relieving the troublesome symptoms. In obesity complicated by chronic bronchitis there is little benefit until the superfluous fat is disposed of. In the obesity complicated by chronic articular rheumatism a marked loss of weight and removal of corpulence is an especial gain in many cases; thereby the overburdened joints are lightened and work is done along the same lines as the orthopedists follow when they make their sensible supporting apparatus bear a part of the pressure. In gout one is hard pressed as to diet. Lean meat may be given, but care should be taken that plenty of green vegetables and fruit are added to the diet. There are frequently accompanying disturbances which demand a reduction cure far more than does the uric acid diathesis itself, such as kidney disease, arteriosclerosis, cardiac weakness, etc. The author often thinks it would be better in these cases to speak of the misuse of alcohol as being the cause of the diseased condition instead of talking euphemistically of gout. There are many other diseases which impede locomotion besides rheumatism and gout, as the hemiplegias,

etc. In these cases the reduction of superfluous fat is an advantage and is an important and urgent therapeutic problem whenever there is a prospect of helping patients by lessening the body weight. Massage and gymnastics are often brilliantly effectual. The favorable influence of reduction cures in certain forms of ischias and other neuralgias which occasionally occur in obese people, is especially to be emphasized. He has cured a number of cases of the supra-orbital and occipital variety of neuralgia by means of reduction cures, also some brachial neuralgias with anginic pains. It is impossible to say whether the reduction will prove useful or not in these cases, but success is frequent enough in his experience to justify the trial. In hysteria the conditions are difficult. Generally the patients are in a poorly nourished condition, but obese cases are not exactly rare, and it is especially those patients who develop obesity through rich diet and muscular laziness that the reduction cure begun under proper direction and carried out with increasing demands on the energy, is often the beginning of a new life with reawakening of strength and self-confidence. Such cures can only be successfully conducted in institutions. He believes that in diabetes mellitus the reduction cures are not entirely contraindicated, though diabetics bear a long-continued loss of body weight just as badly as they do a rapid one. Careful intermittent methods are chiefly to be recommended and the reduction of weight should be carried no further than absolutely demanded. In tuberculous patients we have sometimes an exaggeration of nutrition and he warns against overdoing the overfeeding in these cases. Such exaggerations are unfortunately frequent and treatment directed against the tuberculosis incapacitates the patient, because of the obesity which has ensued. The writer has followed up several such cases and he thinks they are not specially proof against relapses of the pulmonary conditions. They are often considered brilliant examples of success in institutions, but when they get out the downward course begins very soon. To the objection that the dangers of obesity are much less than those of pulmonary tuberculosis he answers that that is true, but one must ask whether it is necessary to drive away one enemy by courting another. In pulmonary tuberculosis it is not only unnecessary, but reprehensible, to try to attain more than a certain optimum of general condition.

Appendix in Relation to Psoas Muscle.

Robinson (Annals of Surgery) says:

1. Trauma of the psoas muscle produces appendicitis.

2. Muscular trauma produces appendicitis if the damage occurs in the appendix when it contains virulent microbes, and especially if the spiral or kinked condition and periappendicular adhesions produce increased tension of secretion—in short, if drainage be compromised.

3. Over seventy per cent. of peritoneal exudates occur in the right iliac fossa adjacent to the psoas, and any peritoneal exudate associated with the ileocaecal appendicular apparatus compromises its anatomy and physiology.

4. In males fifty per cent. and in females forty per cent. of periappendicular adhesions exist. Periappendicular peritoneal adhesions compromise the fecal circulation of the appendix and obstruct drainage; they compromise blood and lymph circulation; they compromise peristalsis; they traumatize nerve periphery; they compromise the nourishment of the appendix, they cripple and devitalize the appendix, making it unable to resist trauma and infection.

5. When muscular trauma acts on an appendix containing virulent germs compromised by periappendicular adhesion, in drainage, in fecal, blood, and lymph circulation, limited in nourishment, and peristalsis with local devitalized atrophic cells end, appendicitis, with ulceration and obliteration, perforation is liable to occur.

6. The dangerous appendix is the one in a spiral or kinked shape within range of traumatic action of the psoas or other powerful muscles. The size and length of the appendix have no special relation to the frequency of appendicitis.

7. The ratio of appendicitis in man and woman is about three to one.

8. It is chiefly owing to the fact that man's appendix is more exposed to psoas muscular trauma than that of woman. The appendix is practically the only segment of the tractus intestinalis in which muscular trauma produces ulceration or perforation. This is due to lack of appendicular cell vitality, lack of blood, lymph and nerve supply, to atrophic cells, and to poor nourishment.

9. Other segments of the tractus intestinalis than the appendix lying within range of muscular trauma show similar adjacent peritoneal adhesions, but no ulceration or perforation because of more perfect drainage and higher cell vitality.

10. In males (300) the cæcum, lying within range of the action of psoas, presents sixty per cent. of peritoneal adhesions.

11. In females (118) the cæcum, laying

within muscular trauma of the psoas, presents sixty per cent. of peritoneal adhesions.

12. Peritoneal adhesions in the mesosigmoid from trauma of the left psoas are eighty per cent. When the distal end of the ileum lies within the traumatic range of action of the right psoas it presents seventy-five per cent. peri-iliac adhesions.

13. The cæcum, distal end of the ileum or sigmoid, though surrounded by distinctly macroscopical peritoneal adhesions, do not present mucal ulceration or peritoneal perforation on account of good drainage and cell vitality.

14. The vitality of other segments of the tractus intestinalis than the appendix resists the conflict, trauma and infection of life's forces, but the appendix does not.

15. The position of the appendix depends on the length of the mesocolico-mesenterium (fixation apparatus); the state of detention of the adjacent viscera, uterus, gastrum, colon, enteron, liver, and kidney; the length of the appendix; the degree of visceral ptosis and laxity of the abdominal walls; the sex, shape of the abdominal cavity; and the existing peritoneal adhesions in the ileocæcal appendicular apparatus.

16. Athletes, baseball and football players, bicycle riders, swimmers, blacksmiths, and trades of vigorous physical activity—in short, heavy workers who vigorously use the psoas—have appendicitis.

17. Cases of appendicitis frequently arise after epidemics which induce catarrh of the tractus intestinalis, as typhoid fever, la grippe: especially after fruit seasons summer diarrhea and catarrh or endoappendicitis arise, because the damaged tunics of the appendix (mucosa and muscularis) do not withstand the muscular trauma of the psoas with accompanying infectious invasions and the obstructed drainage due to compromising periappendicular adhesions.

18. Second or repeated attacks of appendicitis are less dangerous, because the first attack blocks and obliterates the adjacent lymphatics, so that the radiating channels are limited in capacity to carry infection.

19. Almost all post-mortem and clinical evidence points to the appendix as the organ which is most dangerous and treacherous of all abdominal viscera.

20. The appendix being an atrophied organ, its cells are devitalized, with a limited blood, lymph, and nerve supply and deficient nourishment; the weakest segment of the tractus intestinalis is therefore an easy prey to trauma and infection.

21. The appendix is relatively large at birth, and it decreases in size through every subsequent decade of life; hence progressive atrophy with devitalized cells and

damage from periappendicular adhesions make the appendix a dangerous organ in adult life.

22. One hundred and eighteen females showed partial non-decent of the cæcum (and subsequently the appendix) in four per cent.

23. Three hundred males showed partial non-decent of the cæcum (and consequently the appendix) in seven per cent.

24. To find the appendix in operating, follow the distally directed colonic bands (tænia coli) to the point where they converge at the base of the appendix.

25. The data of this paper, confirmed by twelve years of autopsic abdominal inspection and a decade of abdominal surgery, teach that the frequent periappendicular adhesions are not appendicitis but peritonitis; however, the periappendicular adhesions are important steps in the journey of trauma and infection with obstructed drainage toward appendicitis.

26. The foreign body in the appendix is dangerous, because in a non-resisting organ like the appendix it soon produces ulceration, and ultimately perforation, because drainage is deficient.

27. The dangerous appendix is that in spiral or kinked condition when drainage is easily compromised.

28. The appendix, like the mesonephritic rests, is of no physiological or anatomical importance to the adult, but from the atrophic devitalized resistance of its cells it easily succumbs to trauma and infection, jeopardizing the subject to the most profound and treacherous of all abdominal diseases.

29. All fading organs are especially liable to the disasters of trauma, infection, and malignancy.

30. The appendix develops and atrophies irregularly. Its size and function have regard to age.

31. The appendix varies more in position than any other abdominal viscus. It is probable that its position and growth, whether directed proximally, distally, or laterally, have very little to do with the evacuation of its contents if the lumen be not compromised by spirality or adhesions, as any healthy appendix is capable of emptying itself.

32. Its size has the wide limit in variation of all atrophic organs, *e. g.*, the mesonephros.

33. The appendix appears to increase in size from birth to about the twentieth year, when it decreases for every subsequent decade of life.

34. The obliteration of the appendicular lumen by strictures or connective tissue increases from birth to death from constant

atrophy and retrograde processes. The frequent incident attacks of adult life are due to fading vascularity.

35. Of the three organs, distal ileum, appendix, and cæcum, which lie within range of traumatic action of the psos, the least resistant (the appendix) is surrounded by the vast majority of peritoneal adhesions,

36. Periappendicular adhesions check pendicular peristalsis and traumatize nerve periphery, resulting in appendicular colic.

37. Pain in the right side in walking, or pain passing distalward in the distal extremity, may indicate peritoneal adhesions traumatizing the anterior crural nerve or producing a neuritis.

38. Pain may also arise in the right ovarian plexus or right spermatic cord from extension of inflammatory processes, peritonitis, in either structure.

39. The appendix is the weakest segment of the tractus intestinalis because it lacks in vital cell resistance, its blood supply is limited, it is defective in drainage, it is compromised by more adhesions than any other segment, and it is subject to vigorous muscular trauma.

40. The appendix and mesoappendix are frequently infected from the oviducal pavilions, and *vice versa*, to a large extent. Doubtless the formation of the (atrophic.) appendix may have its origin in erect animals (erect apes, wombat and man) through absence of the mesenterium commune (curtailing blood-supply,) the more complete exil rotation of the tractus intestinalis about the superior mesenteric vessels (again curtailing blood-supply), and through the slow descent the cæcum forcing its journey through the subserous connective tissue (constricting blood-vessels) at the proximal end of the colon. Hence the formation of the appendix is due to the constriction of blood supply through extensive axil rotation of the tractus intestinalis about the superior mesenteron vessels and nerve.

41. A factor to consider in regard to the appendix is visceral ptosis, which is due to separation and elongation of the fascial and muscular fibers of the abdominal wall, especially at the linea alba and semilunares, as well as diastasis of the recti abdominales. The mesenteries, not being made for mechanical support, allow the viscera to follow the yielding abdominal wall; this condition increases the number of potential appendices and multiplies the chances for appendicular disease by compromising circulation, assimilation, and traumatizing nerve periphery.

Cardiac Pain and its Treatment.

Latham (Clinical Journal) says: If the pain is due to the heart-burn following dyspeptic disturbances, we must attack the digestive organs. The pain dependent on dyspepsia may be relieved by suitable means; for example, by a careful dietary, by bismuth and hydrocyanic acid and other stomachic sedatives, together with an occasional mercurial purge. A definite attack of pain may be relieved by a mixture such as sp. ether co. and sp. camph. co. aa ʒi in aq. menth. pip. ʒj. If this is not successful, we must have recourse to small doses of morphine.

Local conditions, peritonitis, intercostal neuralgia, and rheumatism are often relieved if we support the parts by strapping or by plasters of belladonna, and the like. If the plaster is applied in strips, it is more efficacious than a piece of plaster four by five inches. Where the cardiovascular system is affected the pain is believed to be often due to dilatation of the ventricle, or to strain following on increased work, and that gives us a clear idea of what we should do for this class of patients, viz., that we should in the first instance give them rest. Careful instructions must be given as to the general health. If these, together with rest, do not relieve the pain, we may apply belladonna plaster, or, better still, flying blisters constantly repeated to the position of the pain. As far as external remedies are concerned, there are only two drugs that have any effect at all upon the pain found in cardiovascular conditions other than dilatation, and those are potassium iodide and arsenic. In aortic regurgitation or arteroma there is no drug which has anything like the power of potassium iodide in from ten to fifteen-grain doses. If after a trial, extending, if necessary, over some months, you find the pain is not becoming less, then try arsenic.

He gives the majority of his cases potassium iodide in the first instance. If this drug, combined with rest, does not relieve the pain, the author recommends arsenic given alternately with potassium iodide. In dilatation we must have recourse to digitalis and other cardiac tonics. During an attack of definite pain in cardiovascular cases, rapid stimulants and carminatives are called for, such as ether, ammonia and alcohol. If these do not relieve the patient, it will be found that leeches, which act so extremely well in the pain of pericarditis, are probably our best remedy, especially when combined with a large dose of calomel. If leeches do not bring relief, then we must have recourse in morphine.

Resection of Small Intestine.

Bernays (Ann. of Surg.) a case in which he resected 9 ft. 11 in. of ileum and jejunum, together with a large sarcomatous growth of the mesentery. The patient, a male aged 30 years, made, it is stated, a good recovery from the operation, and rapidly gained weight. In a table of 35 collected cases of resection of the small intestine it is shown that in 4 instances only did the extent removed exceed that noted in the case reported by the author. In 1 of these cases the patient, a boy aged 8 years, was in good health one year after the operation; in another, a woman aged 61 years recovered after the removal of over 10 ft. of small intestine, but suffered from disturbances of digestion, unaltered food appearing rapidly in the stools. The results of these cases seem to be unfavorable to the view held by surgeons in this country, that more than 6 ft. of intestine cannot be removed without serious risk. With regard to the case published in this paper, the author states that since his paper was written the patient's health has been impaired by attacks of severe headache and occasional vomiting, which pass away after the administration of a saline purgative, and may, it is suggested, be due to overfeeding.

An Experimental and Clinical Research on the Temporary Closure of the Carotid Arteries.

Crile (Annals of Surgery) gives the following summary of his paper on the above subject:

One or more carotid arteries were closed in eighteen patients. Both common carotids were closed in ten; one common carotid in five; one external carotid in three. In all there were twenty-eight closures of individual vessels. These were performed between the years 1897 to 1901.

The ages of the patients ranged from seven months to sixty-nine years. There were no deaths attributable to the temporary closure of the arteries.

In every instance the circulation was resumed immediately upon releasing the clamps. There were no appreciably late effects upon the vessel wall at the point of clamping and none upon the circulation in the closed arteries and their branches.

There were no later cerebral effects. Less anesthetic was necessary with closed arteries, especially in the cases in which common carotids were closed. In the latter case there may be embarrassed respiration, especially later. Wholly or partially releasing one or both carotids gave material and immediate assistance to the respiration.

The operating time was much diminished, since the field of operation was quite free from blood.

The amount of blood loss was strikingly less, as was also the difficulty in keeping blood from the respiratory tract.

The application of the clamp may be accomplished through a very small incision and in several minutes. The proper interpretation of a slowed or of an accelerated pulse, or of an inhibited respiration, the prevention of either direct or reflex inhibition of the heart from mechanical stimulation of the vagus or its branches by the use of atropine and cocaine, the safe and absolute control of hemorrhage by temporarily closing the carotid arteries, render operative procedures of the head and neck so much safer as to greatly increase surgical possibilities.

Sealing of Aseptic Wound.

Marcy, in the Annals of Surgery, believes that clean-cut operative dissection is a very important step toward obtaining primary union. For germs to grow it is necessary to have a favorable soil, and this is produced by tearing, bungling, blunt dissection, clamping of much tissue, and tying of many ligatures. Therefore, not only should the operative field, the surgeon's hands and the instruments be rendered aseptic, but, at the end of the operation, the tissue left in the patient should be as little damaged as possible. Like tissues should be closely opposed by buried, absorbable sutures, preferably of tendon soaked in 1:1000 bichloride, and finally the skin wound closed by an absorbable subcuticular suture. Catgut and silk are discarded because their twisted surfaces give many crevices for the lodgment of infectious material. Such perfect apposition, with physiological rest, gives rapid primary union, and very little serum exudes. Therefore the heavy bungling dressings in common use should be dispensed with and iodoform collodion used. There is nothing to come out and the collodion allow nothing to enter.

Defective Coordination, in Utero, a Probable Factor in the Causation of Certain Congenital Malformations.

John Thomson (British Medical Journal, Sept. 6, 1902) says that there are at least three types of congenital malformation of hollow viscera in which the main anatomical abnormality present consists in very great muscular hypertrophy, for which no permanent organic cause is discoverable. These are: (1) Congenital hypertrophy of the bladder with dilatation of the ureters and renal pelves, and with no organic obstruction. Although in most cases of congenital hydronephrosis there are organic constrictions which account for the condition, still there are a considerable number of cases in which there has been

no permanent cause of blocking whatsoever. (2) Congenital hypertrophy of the colon with no organic stricture. In many cases of constipation with dilatation and hypertrophy of the colon dating from early life, there has been no trace of narrowing. (3) Congenital hypertrophy of the pylorus and stomach wall. There are several points common to all of these three morbid conditions. In all, the main abnormality consists in enormous hypertrophy of the muscular coat of a hollow organ which is known to be functionally active to some extent in utero. The amount of the hypertrophy found in cases dying soon after birth is so great that it is generally admitted that it must have been present, at least to a considerable degree, during intrauterine life. In none is there any evidence of such permanent organic obstruction as we should expect to find giving rise to the overgrowths of muscle. No other abnormalities are usually present, except such as may reasonably be regarded as secondary to the muscular hypertrophy. As to the pathology and etiology, the causation of the muscular hypertrophy is the most important point to be settled. The two chief hypotheses concerning it are: First, that it is a primary developmental hyperplasia; a sort of localized gigantism. Although there seems no impossibility in the idea of a local gigantism of the pylorus or bowel, or bladder, the author doubts very much whether there exists a single instance of a localized true hypertrophy of muscle being primary in character. The second hypothesis is, that it is a secondary hypertrophy resulting from overexertion. We may expect that hypertrophy may occur in utero under the same conditions in which it does after birth. For the proper working of all hollow organs, perfect harmony of coordination is necessary, and even slight disturbance of the coordination may lead to greatly exaggerated exertion. It is most difficult to decide upon the nature of the derangement. The writer states that the comparatively isolated character of this malformation tells against its being really a teratological condition. The prominence of the spasmodic element in the symptoms after birth suggests the possibility of a similar spasm in utero. The apparent continued growth in size of the pylorus after birth, while the symptoms last, suggests the probability of a similar growth in fetal life. The gradual disappearance of the symptoms in some cases, while there is reason to believe that the anatomical condition remains unchanged, and the immediate improvement after stretching of the pylorus in others, which are under the circumstances, points in favor of a func-

tional causation. They also suggest that the disturbance is of a transitory nature. In one case in which the pylorus was stretched, the child improved at once, and has remained well for three years. This seems a further indication of the transitory nature of the case.

Relation of Mental Disorders to Bodily Disease.

Nathan Raw, in the London Lancet, describes the various mental conditions dependent on bodily disease. In heart disease, especially towards the close, mental symptoms may occur, of very variable character, delusions of suspicion and persecution, for instance; rarely they are suicidal, they are especially irritable, and, exceptionally, maniacal. There is no special form of insanity associated with kidney disease, but in the later stages of chronic renal disease, the patients may exhibit marked delusions of fear and suspicion, and they are often delirious, restless, irritable, and show mental failure, until coma terminates the scene. Patients have been sent to an asylum as lunatics when in this condition. In exophthalmic goitre the first symptom, in many cases, is a sudden change in the mental condition; the patient becomes irritable, excitable, and flighty; her moral nature, too, is altered, and she is untruthful, spiteful, and suspicious. Delusions of impending danger are developed, and she has all the appearances of a melancholic. In myxœdema, though in general there is a slowness of perception and conduction, acute attacks of insanity, either mania or melancholia, may develop. In diabetes, the patient is often irritable, fretful, and impatient in the earlier stages, and in the later ones he may become suspicious and distrustful, and may even develop delusions. In typhoid fever there are two distinct phases of mental disorder—one in the acute febrile stage, and the other in convalescence. In the first stage, the patient may rapidly pass into a condition of raving mania, most difficult to treat or control, or into one of wakefulness, with hallucinations of vision and hearing and even delusions which may terminate in a sleep unto death. During the third week there may be profound mental prostration or actual imbecility. Post-typhoid insanity may occur, but the patient practically always makes a good recovery. In the early stages of acute pneumonia, wild delirium and even mania may be marked, and such cases are very fatal. The sleeplessness is due to cerebral irritation at first and subsequently to exhaustion. Insanity never follows pneumonia. Acute mania and delusional insanity followed by profound melancholia

may occur as a result of removal of the testes for diseases of the prostate. The same dire effects may follow operations on the healthy ovaries. We should therefore hesitate before removing these organs when in a healthy state for any disease whatever. Acute mania may follow the application of atropine to the eye in elderly people; the prognosis is fortunately good. He is convinced that a large number of people are certified as lunatics who are simply temporarily insane owing to some bodily disorder or toxic poisoning. Such people should not have the stigma of being detained in an asylum, but should be treated in a hospital for mental diseases.

Auto-Infection, Auto-Phagism and Auto-Intoxication.

C. Walker Watts (Virginia Medical Semi-Monthly) sums up the causes of auto-infection, etc., as (1) Procrastination and violation of natural laws and forces of body, mind and spirit. (2) Haste in mastication, digestion, nutrition, and in defæcation, micturition and alimentation. (3) Diseased teeth and gums. (4) Oral respiration. (5) Lack of proper co-ordination, inverted respiration, paralysis of peristalsis, resulting in constipation and renal and vesical detrition. As a result, perverted micrococci and various germs are found in the brain, meninges, lungs, liver, spleen, intestines, bladder and uterus. *Insanity* is often due to *asanity* or a lack of asepsis and antiseptics. Appendicitis is as often due to these causes as to cherry or grape seeds. The name of irregularities in attention to the just laws of nature and her demands is legion, and duly demands of us a just consideration of these facts. The greatest surgeons and physicians of to-day are those who take care of the "little foxes who eat the vine" of life—human life. The curative remedies are personal supervision, sanitary, hygienic, surgical, medical, mental and moral. Some of them are: A correct inspection and investigation of our asylums, hospitals, privies, etc., incineration of decaying bodies and filth, and a proper use of disinfectants; insistence upon correct regular hours for duties; a due respect for aseptic and antiseptic surroundings and conditions. When there is an offending tooth, tumour or traumatic cause, remove it; the law of suggestion—normal, mental and physical—plays an important part in the case, as do manipulations, massage, position and posture; pure fresh air, exercise, pure water, suitable clothing and cheerful surroundings; and electricity, magnetism, oxygen; pure medicines are equally essential when adapted to individual cases.

Perineal Laceration During Forceps Delivery Prevented by Adhesive Straps.

Noble (American Journal of Obstetrics) in six forceps deliveries has used adhesive strips with perfect satisfaction, using them in cases in which the perineum appeared to be in imminent danger. They were applied after the occiput had passed under the pubic arch and before the period of crowding was reached—that is, before the pelvic floor was very much distended.

After thoroughly cleansing the parts with soap and water and such antiseptic solutions as may be desirable, the perineum and buttocks should be sponged with alcohol to remove moisture. The application should begin with straps one and a half inches wide and eighteen to twenty-four inches long, attaching one extremity well upon the side of the labium and deep into the sulcus between it and the thigh, then passing downward and across the median line just behind the posterior commissure. It is continued on the opposite side round behind the buttock, and attached to the hip at or about the sacroiliac synchondrosis. The second strap is passed in a similar manner on the other side, each one to be applied with as much tension as possible, drawing the labium well downward and the buttock upward. The third strap passes horizontally across the perineum at a level with the posterior commissure, and is fastened on either side to the thighs and hips. As the delivery proceeds the perineum will extend by stretching the skin beyond the edge of the straps, but chiefly by rolling the posterior vaginal wall out in advance of the head. When it has extended as much as one-half or three-fourths of an inch beyond the straps, or appears to be drawn tightly across the presenting parts, another horizontal strip of adhesive plaster is applied, which as a rule will be sufficient to complete the labor.

The straps take the strain off the perineum and change the direction of the presenting parts more or less forward to the normal axis of the outlet by forcing it firmly against the lower anterior surface of the pubic bone, permitting delivery through a smaller orifice than can be effected when the head is delivered in the abnormal or axis of the bony outlet.

The straps are recommended for protecting the perineum, but not for preventing tears in the vagina above the perineum, such as are produced by disproportion and ill-constructed forceps or unskilled management of the latter.

Tomatoes.

Tomatoes according to the Pacific Health Journal, are valuable as food, not on account of their nutritive power, which is quite small, but as a relish. While ordinarily classed as a vegetable, the tomato is botanically a fruit.

Persons having a tendency to acidity of the stomach, may suffer from sour stomach and burning as a result of using tomatoes, not from fermentation, but because the tomato stimulates the glands of the stomach to an increased production of hydrochloric acid. This seems to be especially the case with very early or very late tomatoes, and with canned tomatoes. As with many other foods, the tomato is not so good out of season.

Many people experience distress as a result of combining potato and tomato, the explanation usually given being that the acid of the tomato interferes with starch digestion.

The belief that tomato causes cancer is without any foundation whatever. Aside from its effect on acid stomachs and the irritating effect its seeds sometimes have on inflamed conditions of the intestinal tract, the tomato is harmless,

The General Consideration of Surgical Patients.*

The paper deals with general considerations which have a special bearing upon the success in the execution of clinical surgery. It deals, first, with the fact that a given form of treatment is not applicable to every patient suffering from a similar pathological condition, it being necessary for the surgeon to consider the patient himself very thoroughly before applying the methods intended for his relief.

The examination of the patient is discussed at length and certain measures are condemned as harmful to the patient, among these are prolonged or violent manipulations in the diagnosis especially of inflammatory conditions or malignant growths, in which cases these manipulations are likely to give rise to extension of the presence of metastasis.

Excisions of sections of malignant growths for diagnostic purposes should never be made, because this is very likely to cause an infection giving rise to metastatic growths and changing a relatively harmless condition, which could be relieved by an early operation into an absolutely hopeless condition.

The exploring syringe is discussed and condemned, except in locating abscess of

the brain. The same is true to a greater extent of the exploring needle. Certain manipulations, such as catheterization of the ureter are also considered bad, because the amount of injury to the patient which is likely to occur, is much greater than the amount of benefit which can be obtained if this method is used in preference to other methods which are perfectly safe.

The weight of certain contraindications is considered, such as old age, infancy, obesity, tuberculosis of the lungs, cachexia, etc. The importance of the loss of blood during the operation is discussed and the amount of time spent during an operation and the amount of traumatism caused by the operation are considered. Attention is given to the preparation of the patient, the temperature of the operating room and the other conditions, which are not connected directly with the operation, but which have an important bearing upon the success of work in clinical surgery.

Treatment of Gonorrhea.

Heaton (Birmingham Medical Review) don't believe in the abortive treatment by means of the injection of a solution of nitrate of silver of gr. xv, or xx to one ounce. The disease frequently fails to abort within the promised fourteen days. In fact, the gonorrhea often pursues its course unchecked, or the acute symptoms may even be accelerated and intensified. Moreover, there is risk of urethral and of periurethral abscesses, and of secondary strictures. Systematic treatment and very frequent irrigations of the anterior urethra during the early stages with mild antiseptics are also discarded as too tedious and laborious. The general treatment in acute cases is of great importance. In so far as possible, absolute physical rest should be enjoined. The patient should be kept on a reasonably low diet and fluids should be given in considerable quantity. Hot hip baths are of great service. Both penis and scrotum are to be supported by bandages. Free exit must be given to the urethral secretions, and the glans penis must be bathed at least twice daily to keep it clean. The drug treatment is symptomatic in the early stages. The oleoresins at this stage only do harm. A brisk purge to relieve the bowels, aconite if constitutional disturbance be prominent, alkalies and hyoscyamus to soothe the mucous membrane of the urethra, will fulfil most of the requirements. When the discharge is profuse, some very mild antiseptic mixed with an anodyne is to be used as an injection to wash out the inflamed canal; one or two drams of the liquid are to be injected, without the use of any force, and to be retained for one or

* Abstract of a paper read before the Mississippi Valley Medical Association at Kansas City, by A. J. Ochsner, Chicago.

two minutes. As the acute stage subsides and during the whole of the stage of gleet the various oleoresins form the sheet anchor as internal medicines. Sandal-wood is the most efficacious and least likely to disturb digestion; it is best given in capsules. Cubebs is especially useful in the more chronic cases. At the same stage of the disease, which is marked by a comparative thinness of the discharge and by a decrease in ardor urinæ, the local treatment is altered. Astringent solutions are now indicated. The most useful of these is permanganate of zinc in a strength of gr. $\frac{1}{2}$, increased to gr. $\frac{1}{3}$, to one ounce. The other sulphates, also protargol, are likewise valuable. The great majority of acute gonorrhea may be cured by these means within from four to five weeks. Those which persist and those which reach the practitioner after years of neglect fall into the category of chronic gleet and require an absolutely different plan of treatment. The persistence of the disease may be due either to trouble within the anterior urethra, such as unhealthy condition of its entire mucosa, or a slight stricture with ulceration behind it, or "granular patches," or to trouble posteriorly, such as inflammation or abscess of the deep lacunæ or ducts, or chronic inflammation of the prostate. The use of the cold metal bougie often exerts a marked beneficial effect upon the chronically-inflamed urethra. Local patches are diagnosed by the use of the endoscope, and are treated by direct applications of strong solutions of silver nitrate, gr. xv. or xxx. to one ounce, or protargol, 5 to 20 per cent., made twice or three times weekly. If the trouble lie in the posterior urethra or in the prostate, it is likely to prove extremely obstinate. The use of medicated urethral bougies introduced into the deeper portion of the urethra, the installation of a few drops of some strong astringent by means of a special deep syringe, the daily use of large quantities of some mild astringent introduced under pressure—all these are measures which must be successively and patiently tried, perhaps only to fail.

Treatment of Prolapse of the Rectum.

Halstead, (Medical Sentinel) says: Cases of prolapse in which the protrusion consists of the mucous membrane alone can best be treated by resection of the protruding mucous membrane and suture of the cut end of the skin of the anus, as in Whitehead's operation for hemorrhoids. In mild cases merely clamping and cauterizing linear folds of the prolapse is sufficient to effect a cure. In recent reducible prolapse of all coats of the rectum, removal of the cause (if possible) with message, gymnastics

and appropriate internal medication to improve the patient's general condition, should be first tried. If these fail, either amputation or intra-abdominal suspension are indicated. In young children, operative treatment of prolapse is seldom required. The removal of the cause, which can usually be accomplished with rest in the horizontal position, tonics and massage, will, in the great majority of cases, cure the patient. Among the most frequent pathologic conditions which bear a direct causal relation to prolapse in children, are: Intestinal catarrh, rachitis, phimosis and stone in the bladder. In old irreducible or in recent strangulated cases, the only treatment is amputation by the method of Mikulicz. In old irreducible prolapse, or in recent cases where a fair trial of palliative remedies has been given, we have the choice of two methods—amputation or intra-abdominal fixation. At the present time no authoritative statement can be made as to the value of colopexy. It possesses the following advantages: It is not dangerous; it is easily performed, and, when it is not successful, it does not leave the patient in any worse condition than before. Inguinal colostomy should never be performed except when some special indication exists, e. g., when prolapse is associated with colitis which does not yield to treatment when stricture or malignant diseases are present. Simple catarrhal inflammation of the prolapsed rectum does not justify opening the colon. Rectopexy, if employed, should be used only in the lesser degrees of prolapse of the rectum. In invagination of the rectum and colon it is of no value. In any case its disadvantages and dangers outweigh its good points.

Treatment of Sloughing Corneal Ulcers.

Percy Dunn (The London Lancet) believes that sloughing ulcers of the cornea are best treated from the first with eserin. The strength of the drug used is half a grain to the ounce, and this proportion is never exceeded. Generally speaking, two instillations a day will be found to be sufficient; but if more is considered advisable, there need be no fear of pain or irritation from this strength solution. Hot fomentations are absolutely needful, and some antiseptic solution is preferred. Dunn advises chinosol. In addition to the local treatment, the patient should have good food in abundance, as well as a proportion of quinine and iron. Nursing mothers affected must wean their infants. Dunn urges the use of the actual cautery (on a surface delineated with fluorescin) in the worst infected ulcers.

Transvesical Cauterization of the Prostate.

Bouffleur (*Annals of Surgery*) is convinced of the efficiency and value of cauterization in the treatment of prostatic hypertrophy, but believes that the Bottini method of operating through the urethra is attended by serious disadvantages and dangers. This operation, it is pointed out, is performed wholly in the dark and fails to possess those elements of precision and control which are essentially characteristic of a perfect technique. It occurred to him in 1895 that if cauterization were productive of salutary result, it might be found advisable to apply it from above, through the bladder, and thus obviate all the uncertainties and dangers incidental to the urethral route. Two cases are reported in which the author applied the Paquelin cautery to an enlarged prostate exposed by median suprapubic cystostomy. In one case there were no ill-effects from the operation, and in the other the treatment was evidently followed by considerable improvement. Transvesical cauterization of the prostate, the author has recently learnt, has been practised by Murphy with unsatisfactory results, and has also been employed in Vienna and Paris. Notwithstanding these scanty and not very favorable records, the author is a keen advocate of this plan, which he asserts, has many apparent advantages, and is a simple, rational and comparatively safe and satisfactory method of applying the cautery to prostatic enlargements projecting into the bladder.

Garcinoma in Women.

W. J. Sinclair in the *London Lancet*, summarizes the reasons why early diagnoses are less frequently made than they should be under the following four heads. Thorough familiarity with these cautions will probably aid in indicating cancer at a time when modern surgery will have the best opportunity of cure. (1) The patients are not so well trained and disciplined as German and other women in Continental Europe. They naturally hesitate when they think of going to a medical man to tell of their symptoms, and they neglect the most ominous symptoms with a light heart because they suffer no pain. The consequence is that as a rule cancer patients consult the medical practitioner when it is clearly too late to do any operation justifying the hope of cure or even prolonged immunity, and in many cases advice is sought for the first time only when it is almost too late to palliate. (2) This is clearly the most important of the many diseases regarding which the interests of the general practitioner in the subject and his influence with

his patients are the chief ground for hope of ameliorations. The patient first appeals to him and consequently depends on him whether or not steps shall be taken promptly to bring the best resources of medical science to bear on individual cases. The criticism may be ventured, and is suggested by common experience, that all are not sufficiently insistent on physical examination, even when there is *prima facie* evidence that the cause of the symptoms is malignant disease. It is a painful fact and food for humble reflection that one still sees presenting themselves at the hospitals poor women who have been under medical treatment for a considerable time without an examination being suggested to them, even though the first symptoms they mention, also their ages and the appearance they present should at once suggest the presence of cancer. (3.) Among the causes leading to late diagnosis of malignant disease of the uterus—partly due to tardy presentation of themselves by patients, and partly to the postponement of examination—is the prevalent superstition with regard to a “climacteric hemorrhage.” There can be no hesitation in saying with entire conviction that “climacteric hemorrhage” is, like the collective term “cancer,” one of the inherited burdens which physicians drag along with them to their hindrance and grievous detriment. Apart from pathological conditions usually diagnosable there is no such phenomenon in nature. (4) Another popular delusion which stands in the way of early diagnosis of the uterus is the belief that pain is an invariable symptom of cancer. When the sufferer begins to complain of pain, a gynecologist knows that the disease is too far advanced for radical treatment. The question naturally arises, How is this universal ignorance to be dissipated? If patients only knew what symptoms were suspicious the fear of death would overcome the natural shrinking from examination and the medical adviser would be taken early into confidence. The nature of the subject precludes the popularizing of knowledge by ordinary methods, but a great deal more might be done by the means now available.

Varieties of Diphtheria Bacillus.

Williams (*Jour. of Med. Res.*) shows that not only are there definite and distinct species, but that each species has distinct subspecies and varieties with characteristics which continue to persist under different conditions. Thus varieties as well as species remain separate, and when grown under similar conditions the species show no tendency to become converted the one into the other, while the varieties gradually change, approaching a common norm. Since

in a series of 10 cases of clinically typical diphtheria only one variety of the specifically virulent diphtheria bacillus was obtained from the throat of each case throughout the course of the disease; since from different parts of the same patient only one variety was isolated, and since pseudovarieties were found no more frequently at the end than at the beginning of the disease, it is safe to infer that specifically virulent bacilli do not readily, if ever, change into any form of non-virulent diphtheria bacilli in throats or noses of people during an attack of diphtheria. In a second group a number of healthy throats were examined and many distinct varieties of diphtheria-like bacilli were found, all of which, however, in serial pure culture, retained their characteristics. From a third group the inference was drawn that not only does a variety of the bacillus retain its characteristics for some time in the same throat, but that it may be transferred to other throats without losing its individuality. Finally a number of cultures were examined which had been kept in the laboratory for years. These were freshly inoculated every few days, and but few changes were found in the general shape and properties of the bacilli, as compared with the original observation.

Prevention and Cure of Insanity by Removal of Abnormal Pelvic Conditions.

Hall (American Journal of Gynecology and Surgery, August, 1902), believes that less than ten per cent. of the female insane have normal pelvic organs. He also believes that in the hands of competent operators upwards of 20 per cent. of the so-called chronic insane recover their mentality, and 15 per cent. are improved, after the removal of the physical disease. This is a modest statement, since the statistics of Dr. Hobbs, and the author's own, show a higher rate of recovery—39 and 30 per cent. respectively.

We find that, inasmuch as the pelvic organs are exceptionally exposed to traumatism and infection, they are frequently the seat of disease; and that mental abnormality is more frequently associated with pelvic disease of any other locality outside the large nerve centers. If this be the case, we should ever be on the alert in all cases where there is marked alteration in the mental health of our patients; and while giving due consideration to the whole organism, to make a thorough investigation of the conditions of the pelvic contents; and in so doing we shall frequently be rewarded in finding in the pelvic disease the local irritations resulting in the abnormal psychic manifestations.

The Relation Between Diphtheria and Ear Disease.

Stangenberg (British Medical Journal, Aug. 23, 1902) has examined one thousand cases of diphtheria in which the diagnosis was confirmed by bacteriological examination. The patients consisted of 308 under five years, 298 under ten years, 133 under fifteen years, 126 under twenty years, and 135 over twenty years of age. Of these, 243 showed signs of aural complications; 109 cases (44%) occurred in children under five years, and 79 (32%) in those were over five and under nineteen years. Of the remainder, 24 (9%) were under fifteen, 13 (5%) under twenty, and 18 (7%) over twenty. Otalgia was present in 16 cases. It was generally unilateral, accompanied the onset of the disease, and declined with the disappearance of the faucial lesions. Salpingitis of the Eustachian tube was present in 190 cases; in 60% it appeared in the first week; in 7% in the second week; in 1% in the third week; and in 0.6% after the the third week. Exudative middle-ear disease was observed in 65 cases; in 14 cases (21%) in the first week; in 22 cases (33%) during the second week; and in 7 cases (12%) in the third week. As to the route of infection, the readiest suggestion supposes an extension by the Eustachian tube, but in the larger proportion of cases the complication occurred after the first week.

From a careful study of the 243 cases he concludes that ear complications are not a necessary accompaniment of the severer cases of diphtheria, but that they often occur in slight cases at a late stage of the disease. The exact mode of infection is difficult to delineate. The aural troubles were all slight in character, and this was perhaps due to the fact that antitoxin serum was always injected immediately the patient arrived at the epidemic hospital. He never observed a case of primary or secondary "otitis externa diphtherica" amongst the one thousand patients, but just after publication a solitary case was met with in his polyclinic.

Acute Cystitis.

G. Frank Lydston (Medical Age, Aug. 25, 1902), recommends the following in the treatment:

Absolute rest is essential. This involves three points: (1) Physical rest; (2) rest of the urinary function; (3) sexual rest. The importance of fulfilling the indications in these directions is at once obvious. The patient should be put to bed and remedies given to lessen the frequency and severity of contraction of the bladder, and allay sexual irritation. Opium is the king of all remedies to promote rest of the bladder

and allay the profoundly depressing and irritating effects of vesical inflammation upon the general nervous system. The importance of relieving the pain requires no comment. Opium may be given by the mouth, hyperdermically, or per rectum. Where immediate action is demanded, the hypodermic injection of a full dose of morphine in the hypogastrium best serves the purpose. In a general way, however, opium acts best in acute cystitis when administered by the rectum, either in the form of suppositories or solution. It should be given in sufficient dosage to allay pain and greatly reduce the frequency of micturition. It may be combined with gelsemium and bromides, with the view of allaying sexual irritability. These remedies are best given by the mouth.

Where the vesical inflammation is secondary to chronic diseases of the urinary way, all local treatment of the chronic condition should cease. It is desirable to aseptinize the urine so far as possible. This may be best accomplished in cases of pus infection by urotropin, in doses of five to ten grains three or four times a day. When the urine is primarily highly acid, as it is likely to be in gouty or rheumatic cases, urotropin should either be guarded by alkalies or substituted by such remedies as benzoate of soda, salol, and eucalyptus. Boric acid, in fifteen or twenty-grain doses, is often efficacious. Combinations of alkalies with the vegetable acids such as citrate and acetate of potassium, are very useful in reducing acidity of the uride, and lessening its irritating properties. It is the general custom to give large quantities of water in vesical inflammation. This he believes to be wrong in principle. What the bladder demands is rest. The ingestion of large quantities of water imposes upon it very frequently a degree of overwork that is extremely injurious. Liquids should be taken in moderation, except such as are necessary to relieve thirst and in the form of fluid ailment to sustain nutrition.

The ideal food is milk. It must be remembered, however, that when milk does not agree it is well not to insist upon its ingestion. Very frequently, because of fermentation in the digestive tract, it produces products which are extremely irritating to the urinary mucous membrane.

The application from six to a dozen leeches over the hypogastrium is often of signal service, particularly in patients who are plethoric. Bleeding should be encouraged by warm fomentations. Hot applications in the form of cataplasms, applied over the hypogastrium, are very useful. Where the necessary movement is not pain-

ful, prolonged and frequent, hot sitz baths are of great service.

In the majority of instances, as soon as the acute inflammation has subsided, local treatment is necessary to restore the mucous membrane to its normal condition, and prevent the supervision of chronic cystitis. Irrigations with antiseptic solutions, such as boric acid, oxychlorine, permanganate of potassium, and nitrate of silver, embrace the most important remedies for this purpose. The new silver salts, such as protargol, argonin and nargol, are very useful, especially of gonorrheal origin. Instillations of one or the other of the silver salts by means of a capacious deep syringe, the fluid being allowed to remain in the bladder, are of very great service.

The Neural and Psycho-Neural Aspects of Surgical Practice.

C. H. Hughes, (Railway Surgeon, Aug. 1902), thinks that the lumbar puncture needle promises to be of as much service to the near and new oncoming neurology and surgery as the ophthalmoscope, microscope or the reagents of chemistry have been and now are. Neuro-surgical diagnosis and prognosis are even now receiving new impetus from them in many directions. Recently, before the Medical Society of the Paris Hospitals, many wonderful and valuable reports have been made of this method of cyto-diagnosis, beginning in October, 1900, with the reports of Widal and Sicard and Ravaut, his assistants. Since the first communication of Widal a flood of reports confirming the value of this method of cyto-diagnosis have appeared in the literature of clinical neurology and general medicine. Monod, in Paris, examined the cerebro-spinal fluid of fifty nervous patients, finding leucocytosis in locomotor ataxia and general paralysis, finding nothing significant in alcoholism, hysteria, hemiplegia or neuritis. Chauffard, Boinet, Rabaud (same source as above, viz., *Bulletins and Memoirs of the Medical Society of Paris Hospitals for last year*), confirmed the findings of Widal and his assistants in tabes and general paralysis.

Many interesting showings were made by examinations of the fluid too lengthy for detail here, among them Nageottes' finding that in syphilitic meningo-myelitis mononuclear leucocytes predominate in the cerebro-spinal fluid, while in the non-specific cases the majority of the cellular elements are polynuclear. The cerebro-spinal fluid was found normal in hemiplegia, brain tumor, etc. In tubercular meningitis, lumbar puncture showed increasing lymphocytes and low osmic tension, while this cerebro-

spinal fluid injected into rabbits caused tuberculosis.

Here is an important feature in which surgery may assure itself as to the state of the meninges after surgical operations and of the existence or non-existence of tuberculosis, perhaps of the central nervous system, when spinal puncture is used for anesthesia.

The cerebro-spinal fluid after this operation should invariably be saved and microscopically examined. The number of leucocytes should be examined and counted. Laubry reported a case of supposed tubercular meningitis disproved by this form of cytodagnosis, where autopsy showed cerebellar tumor. This work is still going actively on in France. American surgery should take it up, and keep it up, until the new mine of diagnostic wealth shall have been worked out. In miner's parlance there is undoubtedly "rich pay dirt here," for clinical surgery as well as for neurology.

Plomatin Poisoning.

A. Rixa, in the Medical Summary, has recently had several cases. The best illustration of a severe case of fish poisoning, is the case of a grocer, 32 years of age, of robust and good health. He made his lunch of fish (none in the family could give any information about the class of fish). It was an unusually hot day in the month of July. He felt no discomfort until after midnight that day, when he was awakened by nausea and griping pain in his bowels. Soon vomiting set in of mucus, colored with bile. When summoned, Rixa found the man with cold perspiration pouring down his face. Soon after, fever set in to a temperature of 102 deg.; pulse, 140; respiration about 40, shallow and irregular. Pain in the stomach and intestines, with great sensitiveness on pressure. Rixa proceeded to wash his stomach and large intestines, administering right after a dose of five grains of calomel, following it up, the coming morning, with a bottle of citrate of magnesia, for the cleansing of the small intestines. Morning's temperature, 101 deg.; pulse, 130; with excessive tenderness to the digestive tract. Second day, temperature the same, pulse more firm; sensitiveness to stomach and bowels diminished; having had a number of watery stools during previous day and night. He prescribed an antiseptic intestinal wash, glycozone, two ounces, hot water, twenty-four ounces, for mornings and evenings. At the evening call the temperature was 100 deg.; pulse, 110; respiration, 28. Having had some favorable experience with the internal use of glycozone in acute gastritis, he then prescribed a teaspoonful to be

given, diluted with water, every three hours. This treatment was kept up for a week, until all unfavorable symptoms disappeared.

The other case of serious nature was a lobster poisoning. Mrs. M. S., about 25 years of age, was eating a "fresh" lobster in a first-class restaurant, at night, after a theater performance. She felt some discomfort right after eating it, but thought to counteract it by drinking a big dose of whiskey. She slept all night without disturbance. However, in the morning, she was suffering from nausea, vertigo, ringing in the ears, "like big bells," as she expressed it, pain in all the joints, and griping in the bowels; no stool. Temperature, 101.5 deg.; pulse, 140; respiration, 36. The treatment as above was prescribed, and the woman made a quick recovery.

Environment and Malaria.

O'Connell (The London Lancet, Sept. 6th, 1902), mentions the importance of meteorologic conditions, especially the moisture in malaria, and summarizes his views as follows: "1. Cases of fever, clinically identical with malaria, occur in the blood, of which parasites could not be found after repeated search before quinin had been given. 2. The meteorological environment found where such cases occur, and, indeed, in all malarial climates, increases the amount of water in the blood of those exposed to its influence by impeding elimination through the skin and lungs (evaporation—heat loss) and through the kidneys. 3. There is known to be increase of water in the blood of those suffering from ague (Liebermeister). 4. Increase of water in the blood increases metabolism—i. e., heat production—and produces a rise of body temperature (Payne). 5. As environment thus causes diminished heat loss from the body and increased heat production within the body it is plain that it causes pyrexia. 6. This pyrexia must be of intermittent variety as the environment which produces it is of intermittent intensity—i. e., undergoes diurnal variation. 7. Elimination of water from the blood (sweat) in ague reduces the temperature to normal. 8. Increase of water in the blood produces poikilocytosis, pseudo-parasites, liberation of hemoglobin, extensive destruction of red blood corpuscles, and melanemia. 9. An extreme degree of these changes obviously leads to hemoglobinuria. 10. Increase of water in the blood produces enlargement of spleen. 11. Removal from the environment that produces increase of water in the blood usually cures ague. 12. All treatment of ague which is efficacious reduces the amount of water in the blood.

13. From these facts I think it is not unreasonable to conclude that those cases of ague or intermittent fever in which no parasites can be found are demonstrably due to the environment under which they arise."

Some of the Medical Aspects of Adenoid Vegetations as Exhibited in Infancy and Childhood.

Hutchison (The Clinical Journal) says that it is not generally known to the profession at large that infants have adenoids. Their presence in very early life indicates that they may have developed in utero. In one group of these cases the predominant symptom will be obstructed nasal respiration, attacks of nose bleed and bronchitis may coexist. In a second class of cases the most striking symptom is a cough, which may simulate pertussis. Other phenomena more or less in evidence comprise snoring, stridulous respiration, dysphagia and profuse sweating of the head. To sum up, then, there are three types of symptoms, viz.: nasal, laryngeal and pharyngeal or esophageal.

Adenoids in infancy have to be differentiated from congenital syphilis and congenital stridor of the larynx. Syphilis is imitated by the nasal obstruction, snuffing and purulent discharge of adenoids. In fact, the diagnosis could hardly be made without the aid of the family history and cutaneous lesions of syphilis. Congenital stridor appears to be a pure neurosis, and a digital exploration of the pharynx should suffice for differentiation. In regard to the treatment of these cases the rule is that the younger the child the more the likelihood of recurrence.

Latent Pneumonia.

Littlejohn (Edin. Med. Jour.) finds pneumonia the most common of all acute inflammatory disease that may run a latent course during the whole period of their existence. These cases are of especial medico-legal importance. During the years 1886-90 and 1897-1901 he saw 33 cases of true latent pneumonia. The cases had the following characteristics in common: (1) The disease was unsuspected during life, the sufferers having exhibited no sign of bodily weakness sufficient to attract the attention of those living in close relationship with them. In a certain proportion, strict inquiry from the friends disclosed that the deceased person had complained of a feeling of illness; sometimes of shortness of breath, pain in the side, cough, etc. But such complaints were indefinite in character and were usually not referred to again. (2) Death occurred suddenly or followed within an hour or two after the appearance of serious illness and before medical attend-

ance was sought. (3) The disease was well advanced, the lung, in the majority of instances, being in the state of gray hepatization. Many of the patients gave a history of excessive alcoholic intemperance and, notwithstanding the modern views concerning the specific nature of the disease, the author believes that we cannot deny the potency of a chill and diminished vitality of the tissues in disposing to pneumonia is more apt to be latent than any other form.

Thoracic Injuries Involving the Lungs.

William G. DeBoutillier in the Annals of Surgery has this to say on the subject:

"Modern surgery has been slow to extend its operations to the thoracic cavity and viscera. In deterring the surgeon from attacks upon them, two justly dreaded dangers have been prominent; the danger of collapse of the lung from pneumothorax, and of infection of the pleura.

"It has been held until recently by most surgeons of prominence, and the opinion is strongly supported, that in the treatment of cases of injury to the thoracic viscera the wisest and safest course to pursue is one of operative non-interference, even in the presence of the most alarming hæmorrhage. It is claimed that such hæmorrhage, even when from large vessels, is apt to undergo spontaneous arrest, and that by declining to open the thorax there is less danger of the infection of the pleural cavity following. Within the past few years numerous advocates of aggressive policy have arisen, and some are extremely radical as to the indications for operative interference after thoracic trauma, going so far as to advocate operation, at least of an exploratory nature, when there is reason to believe that even an intercostal artery may have been injured."

He reports two cases of injury to the lung, one of rupture of the lung without fracture of the rib, the other of a pistol-shot wound penetrating the lung. Both cases were operated upon and both died.

The writer says, "in thoracic traumata the special symptoms of injury to the lung are hæmoptysis, hæmothorax, pneumothorax and subcutaneous emphysema, but the lung may be penetrated without the occurrence of a single one of them, and the presence of any one of them cannot be considered positive proof of the existence of a wound of the lung. Emphysema may occur in wounds of the thorax even without penetration of the pleura. Pneumothorax may occur in penetrating wounds of the pleura, though the lung is not injured. Hæmoptysis after contusions or in cases of thoracic wounds points very strongly to pulmonary injury, but may be due to

hæmorrhage from a cavity or other tuberculous lesions.

"Many penetrating wounds of the thorax, where the injury to the lung has been considerable and the hæmorrhage abundant, produce few if any serious symptoms, and recovery follows smoothly and promptly under appropriate and conservative methods of treatment. Without question recoveries do follow the most alarming conditions produced by hæmothorax or pneumothorax, when absolute quietude is maintained. But under the expectant plan of treatment the death rate remains high in cases of large hæmothorax.

"It is useless to base an argument as to treatment on the mere fact of a penetrating stab or gun-shot wound or lung injury. More important factors are the amount of hæmorrhage and the degree of collapse of the lung produced by either pneumothorax or early or late hæmothorax.

When the original effusion of blood is moderate in amount or small, a primary operation is hardly indicated, unless one takes extreme views or is controlled by a desire to prevent subsequent infection, but the final result in cases of large hæmothorax is not always quite satisfactory, for recovery takes place slowly, and the lung is somewhat crippled by thickening of the pleura or unabsorbed products of coagulated blood. Operations on account of the subsequent development of infection in the effused blood are fairly frequent, so that the results are not as satisfactory as the advocates of a do-nothing policy would have one believe.

"When the pleura is normal pneumothorax soon disappears, the air being often absorbed in a few hours, or in from one to three days if it is present in large amount. Nitrogen is said to remain longer, so that the injections require to be repeated only at intervals of about four weeks.

"The normal pressure within the lung is negative. When air is introduced into a closed pleural cavity four pressure changes may occur. 1. The pressure may still remain negative if the quantity of air admitted is small enough. (2.) There may be just enough air to balance the original negative pressure. Enough air may be admitted to make the pressure within the pleura positive. (3.) When this positive pressure is extreme, the lung collapses completely and is subject to compression, the diaphragm is pushed downward, the mediastinum to the opposite side and the thorax on the affected side is less mobile and of increased circumference. Neither expiration nor inspiration causes any expansion of the lung on the affected side. (4.) When positive intrapleural pressure is less extreme, the lung on the

affected side is ineffectively controlled by the thoracic wall.

"To prevent the occurrence of collapse of the lung in thoracotomies, or to treat it, a number of procedures have been proposed or employed, namely:

"1. To inject a certain amount of sterile water or air before the operation.

"2. To prevent evaporating under a spray.

"3. To let the air in slowly through a small opening at first.

"4. To keep the wound open as short a time as possible.

"5. To tampon the wound in the pleura with gauze, so that its lumen will be smaller.

"6. To hold the pleura with the finger.

"7. To suture the pleura to the chest wall (pneumopexie).

"8. To convert the pneumothorax into hydrothorax and aspirate.

"9. To increase the intrapulmonary pressure by inflation, through masks, after tracheotomy or by the Fell-O'Dwyer apparatus."

"When largely open thoracic wounds with external hæmorrhage occur, there is no question that one will attempt to arrest the hæmorrhage. But it seems equally clear that when an internal hæmorrhage from any source threatens life, an attempt should be made to arrest it, and that extensive pneumothorax should never be allowed to cause death from suffocation without interference.

"Operative interference is not only justifiable, but imperatively called for.

"1. In distending pneumothorax from whatever cause. If aspiration or the introduction of a trocar does not give relief, thoracotomy should be done, and the lesions thus ascertained treated in appropriate ways.

"2. In large hæmothorax in cases of fractured ribs, contusions of the thorax without external wounds, and penetrating wounds of the thorax without regard to the nature of the weapon producing the injury.

"3. In extensive and progressive subcutaneous emphysema after thoracic injuries.

"The nature and extent of the measures to be resorted to must be determined according to the needs of the particular case.

"Exploratory operations may be proper in order to determine whether wounds in the lower part of the thorax have penetrated the diaphragm or peritoneum; or to satisfy one's self as to the integrity of the heart or pericardium as well as of the internal mammary or intercostal arteries; or to provide proper drainage in wounds where infection is suspected."

Clinical Significance of the Tongue.

Samuel E. Earp, (Medical and Surgical Monitor) mentions the following points:

The tongue should not be considered an independent source of information, but accepted in connection with other symptoms; furthermore, indications of disease in other organs must be considered. Again, the coated and dry tongue of the aged person must not be given the same importance in its relation to gravity as that of young persons. Stedman calls attention to the necessity of recognizing that the tongue is not modified in every abnormal state; for instance, it sometimes presents no changes in cancer of the stomach or gastralgia or enteralgia.

When the tongue is protruded, if it be tremulous or slow in action or abnormal in its position, it suggests untoward conditions of the nervous system, perhaps a weak and debilitated state, and when the tip is inclined to the cheek some form of paralysis. Even if it be not inspected, imperfect articulation points to a cerebral source. If the organ be flabby with imprints of the teeth, we look to the abdominal viscera and in some instances, more particularly the digestive functions, or, perhaps, anæmia. We must bear in mind that any disease of the organ itself which produces a quiescent state would necessarily encourage the indentations, while the dire results of syphilis should be taken into consideration. Inflammatory conditions of the mouth and throat produce a redness of the tongue, and prominence of the papillæ in the strawberry tongue of scarlet fever is familiar. The blue tongue of cyanosis is readily recognized. It would be improper to omit the mention of the pigmented spots of Addison's disease. A coating which is light in color may be found in the early stages of fevers while the yellow appearance may indicate some lesion of the liver, especially prominent in pronounced cases of jaundice. Deficient secretion is characterized by a dry tongue, sometimes fissured, and the glandular organs generally show an imperfection, notably the salivary glands. Febrile diseases long continued are oftentimes characterized by a fissured tongue. Da Costa has called attention to the crusted fissures of parasitic origin and a dryness due to prostration with a tendency to sinking, quoting Dickinson as saying that a dry tongue is present in about fifty per cent. of fatal cases and that more than any other it foretells death. Musser believes that a dryness is oftentimes due to the altered condition of the salivary glands and not necessarily due to gastro-intestinal disturbance. Stedman says that in chronic inflammation of the stomach, the tongue is redder than

normal, somewhat dry, glazed, covered in places by patches of aphthæal or epithelial detritus.

Stedman quotes Ballet as observing hemiatrophy in locomotor ataxia and attaches much importance to the diminution of size of the tongue in one side, and its surface drawn up in ridges; this he says may be the first recognized symptom of the disease. Another point of diagnostic difference is important in reference to gastric ulcer and cancer, in the former a coated tongue, in the latter no coat unless there is fever.

There are certain influences which affect the tongue in color and dryness which must be remembered; foods, tobacco and particles from the air frequently color the tongue, and prolonged conversation, nervous excitement, drugs such as atropia and morphia produce a dryness, and it is all important to bear in mind the mouth-breather. Mental emotions such as grief or joy, mental overwork, may produce a coated tongue, and it is true that quite frequently in the early morning the posterior surface of the tongue presents a coating that lasts but a few hours and may be of no importance.

Cyclic Albuminuria.

Huger (Medical Exam. and Prac.) concludes an article on the subject as follows:

That the cyclic albuminuria, like the recognized pathological albuminuria, is due to one or perhaps all of three causes:

1. Inflammatory and degenerative changes in renal structure, as evidenced by the finding of casts. There is every reason to think that by careful searching casts will be found far more often than previous reports lead us to believe.

2. Alterations in the quality of the blood which render its serum-albumin more diffusible. There is nothing to prove an interior diffusibility in these cases, but the patients are almost always anemic.

3. Alterations in the degree of blood pressure. Here due to a mechanically increased pressure on the renal veins.

Having learned that occasionally these cyclic cases pass into Bright's disease, but that by far the majority have gotten well and that many have been followed for years and then lost sight of in their same condition, it must be admitted that Moxon and Arnozan were right in dividing them into two groups: (a) Those few which develop a continuous albuminuria, and (b) the vast majority which get well. Continued rest in bed for a long period should always be urged, because at any rate it removes the exciting cause. One of my cases remained free from albumin for three months after being in bed for three weeks.

I believe that by a very careful examina-

tion for casts a large percentage of cases will be found to contain them, and that the serious prognosis given because of their presence will be modified.

Neurasthenia: Its Etiology, Symptomatology and Treatment.

Rockwell (International Medical Magazine) suggests the following plan of treatment:

One of the first questions to be decided is, Shall be work or rest? Both are of value, but they must be differentiated. To recommend activity to the case that demands rest, and rest to the one who should be active, is most pernicious advice. Rest is demanded in certain cases of neurasthenia attended with cerebral excitement, and especially where physical exhaustion follows cerebral excitation, due to slight external emotional causes, and also perhaps in most cases of myelasthenia. The physical causes that suggest rest are malnutrition and emaciation, old age, conditions of anemia, and those distressing and disabling motor and sensory symptoms associated with, and the result of, spinal exhaustion. In a very general way, it may be said that rest is for acute cases, those that are susceptible, congestive, while work is for chronic and apathetic cases, for the dull and sluggish. In all acute psychoses there is a cerebral hyperemia which exercise aggravates.

Mental therapeutics is without doubt an important factor in many neurasthenic cases. Neurasthenia is, however, no imaginary disease, and no appeal to the imagination alone will overcome the profound loss of nerve tone characteristic of the disease, nor rearrange the delicate fibrillary connections of the neurons disturbed by the constant impact of psychical forces. The physician must have the confidence of his patient, and this he can have only by recognizing his infirmities and treating them with consideration, sympathy and respect. Then, by gently encouraging the patient and urging him to bring his intellectual forces to bear upon his abnormal emotions, the morale is reinforced and substantial aid afforded.

We cannot well get along without judicious medication. The weak and erratic nervous system must be temporarily sustained and soothed while the patient is profiting by the slower processes of hygiene and external methods of treatment, such as electricity, hydrotherapy, and massage. On some one of the various bromide, including the bromide of zinc, ether alone or in combination with belladonna, cannabis indica, etc., according to individual idiosyncrasies, it has been cus-

tomary with the author to rely more confidently than upon most other combinations.

His experience with many hundred cases of neurasthenia, he believes there is no single remedy that quite equals electricity. If it be true that neurasthenia is a disease of exhaustion, of impaired nutrition, then theoretically electricity ought to be of service, since as an aid to nutrition its position is sufficiently assured; and practical experience certainly teaches one that electrization is altogether the most powerful means at our command in the final restoration of perverted cellular nutrition. The neurasthenic appears as a rule to be well nourished; he frequently gains weight; his color is good, and his appetite often first-class. But is he well nourished? How can he be well nourished with a nervous system so erratic and unstable that the slightest influence is sufficient so to cause a general nervous disturbance, manifested in the flushed face, perspiring hands, dizziness, and perverted vision? The neurasthenic is not only not well nourished, in the true sense of perfect nutrition, but he often suffers from toxic influences, which may be both a cause and a result of the undoubted malnutrition of the nerve cells. Our experience teaches us that there is no remedy to the effects of which there is a more varying degree of susceptibility; and especially with neurasthenics, a well kept record of cases will show a most remarkable variety of conditions. Consider, for example, the difference in susceptibility to the galvanic current. There are cases in which anything over ten or fifteen milliamperes on any part of the body seems to provoke irritability, while one-half this strength applied to the head becomes decidedly disturbing. On the other hand, there are neurasthenics whose very disease seems to make them equal to the endurance of unusual strength of current, which it is found necessary to decrease as improvement progresses. These remarks apply to other manifestations of electricity.

Static electricity is especially valuable in conditions of disturbed circulation resulting in local congestion. The kidneys often suffer, and the author has recorded a number of cases in which albumin and casts have appeared, consecutive to long-standing neurasthenia of this type, and speaks highly of the action of static electricity in these conditions. The circulation is equalized, and especially as a tonic and sedative its good effects are not slow in manifesting themselves. In connection with prolonged application of the high-tension induction current over the kidneys, the disappearance from the urine of both

albumin and casts has in several instances been observed. Not only does electricity directly influence nervous action through the vasomotor system, but it excites vital function by action directly on the cell itself and on the protoplasm, thus hastening nutritive changes and cellular activity.

In still another way may electricity influence neurasthenia and hysterical conditions. Pathologic conditions show that conductivity of the neuron may be complete or incomplete according to the degree of the permeability of the nervous tract. If the nerve current can pass, it is translated into sensation, movement, intelligence. If it cannot pass, and there are no gross structural changes, we get a variety of the functional neuroses. On theoretic grounds, and because of practical results, the power of electricity can hardly be questioned, and especially when used in the form of static vibratory potentials or waves, to greatly aid in restoring the interrupted conductivity of the nerve tracts.

Changes in Spinal Cord in Pernicious Anaemia.

Cabot, (Boston Medical and Surgical Journal) says nearly every case of pernicious anæmia shows lesions in the spinal cord post-mortem, whether these cases have given rise to symptoms during life or not. The distribution of the lesions is usually symmetrical or nearly so. The portion of the cord especially affected is that occupying the cervical and dorsal regions, the lesions progressively decreasing in intensity and extent to the lower levels of the cord. The gray matter is usually unaffected. The posterior columns, and sometimes the lateral columns are liable to be affected.

Occasionally hemorrhages in the cord are found. Sometimes increase of neuroglia, and thickening of the vessels.

Bastionelli divides the cord lesions of pernicious anæmia into three groups: First, those occurring in rapidly fatal cases, where nervous symptoms are slight or absent and are overshadowed by the symptoms of general anæmia. Such cases show irregularly scattered foci of degeneration, chiefly in the posterior columns. Some in the lateral columns. Second cases of slow clinical course in which nervous symptoms (paralysis, etc.) appear earlier and later the anæmia is noticed. Third, cases in which the lesions are mainly due to multiple hæmorrhages.

The great majority of writers on the subject agree in considering the lesions as a manifestation of toxæmia similar to the lesions found in diphtheria, pellagra, ergotism and diabetes.

Rheumatism.

Desplats (Medical Press, Aug. 27, 1902) says that the juice of lemon is an excellent remedy for rheumatism, acute or chronic. He relieved an old woman who suffered much from chronic rheumatism, and was almost a cripple from the malady. A similar success attended its administration for acute rheumatism in a young girl, while in three days he cured himself from erratic rheumatic pains. The writer advises two lemons daily to begin with, and increase gradually until the desired effect is obtained. A substitute was tried for the juice citric acid, but he found that the patients could not tolerate a sufficient amount of this acid. Dr. Vignes has the same high opinion of the efficacy of the juice of lemon, not only in rheumatism, but in gout. Although it does not cure a malady which is in itself incurable, it relieves the pain, and that is a great point. On the other hand, it in no way disturbs the digestive functions, nor does it produce anemia.

Suture of the Solid Viscera.

Coffee (The Medical News, August 30, 1902) refers to the liver, spleen and kidney. He describes his method as follows: Two sutures are used; one being applicable to an incision which does not penetrate the liver entirely, and the other is applicable to wounds in which the liver is severed through and through. One he calls the *Y*-suture and the other the *X*-suture. The *Y*-suture is placed as follows: A round, curved needle, at least four inches long, armed with catgut or silk, is passed through the catgut support to the bottom of the incision, comes out on the other side, passes through another catgut support, re enters through the support of the same side, goes back parallel to the other stitch and comes out through the support from which we started, making a quilt suture. A suture is then passed from the opposite side of the liver, either straight through or indirectly, as may be convenient, includes the two threads at the bottom of the cut in its loop, comes out on the bottom of the liver and again both ends passing through a single catgut weave are tied in the form of a quilt suture, thus drawing the other suture well into the bottom of the cut. The first suture is now tied, and any amount of pressure can be used, for the line of pressure is not against the suture, but is upon the catgut supports. Thus the bottom of the wound is brought in absolute opposition, and any amount of pressure desired may be used. This may not bring the surface of the liver in as close contact as is desired, therefore, a second quilt suture is passed through the edges of the support, nearest the wound, simply

taking in the capsule. In this way the tissues are absolutely brought in contact, and as much pressure can be brought to bear in closing a wound of the liver as in any other part of the body. In closing a wound of the liver which extends entirely through its substance, a modification must be used. Instead of the single suture which goes into the bottom of the liver, a second quilt stitch is passed through both sides on the bottom, the same as the Z-suture above, interlocking the two sutures to the center of the wound. In this way the pressure is brought to bear in a very effectual manner. For the benefit of those who are working along this line, the writer suggests that the needle should be round, full-curved, and fully four inches long, while the counter-stitch may be made with a simple darning-needle or any kind of a long straight needle.

The Use of Narcotics in the Treatment of Insomnia in the Early Stages of Insanity.

Henry Rayner, in the July number of the *Journal of Medical Science*, says that the deprivation of sleep produces more distress and a more speedy fatal termination than deprivation of food is proof of the predominant need of sleep by the brain and body. In cases of insomnia of some duration there is a general disorder of nutrition, and this is nowhere more marked than in the cases of incipient or threatened insanity in which wasting rapidly follows upon insomnia. The drugs generally used in procuring sleep, such as morphia, chloral, and sulphonal, have an injurious effect on the nutrition of the body, and their dosage has to be increased to secure sleep if the drug has to be used for protracted periods. Such disadvantages, however, can be avoided by using prolonged baths, and gentle massage as a sedative and hypnotic measure, as they not only induce sleep but improve bodily nutrition by promoting elimination of waste products. Narcotics, it is also argued, depress the cardiac, vasomotor, and respiratory centers. The beneficial effects of narcotics, however, appear to be undoubted, but these effects are regarded as being obtained at the expense of the brain, the nutrition of which gets slowly impaired by the use of narcotics. "My individual experience has led me gradually to discard the use of narcotics altogether in narcotic dosage, and to use them only at rare intervals in the hypnotic form, and then only in the form of bromide or of alcohol." He points out that many practitioners are too prone to use morphia or opium when insomnia exists, and that the temporary benefit which follows as regards the restoration of sleep is often neutralized by the injurious after effects resulting from

the use of this drug. Dr. G. Fielding Blandford has stated that the use of hypnotics are often imperative in the insomnia of early or threatened mental disorder, and that the benefit was very great and material. Paraldehyde has in his experience always proved a safe and excellent hypnotic.

A Case of Nasal Vertigo.

E. Woakes (*Lancet*, August 16th) reports the case of a man, aged forty years, who had suffered for eight months from fits, which were thought to be epileptic. There was a modified aura, then a period of unconsciousness with clonic spasms of the jaw, followed by gradual recovery; the patient never injured himself. The attacks occurred almost daily, the patient's memory became defective, and he wept frequently. On examination of the nose, the right middle turbinated bone was found to be greatly enlarged. It was removed with cutting forceps, and the epileptoid attacks ceased immediately. He remained well for four years, when the attacks began to recur; examination showed hypertrophy of the left middle turbinated bone, removal of which was followed by complete recovery. Three symptoms differentiated this case from one of true epilepsy and transferred it to the groups of vertigos due to disturbance of the equilibrating apparatus of nasal origin. The three symptoms were: (1) Hyperacusis, indicated by the distress occasioned to the patient by the occurrence of the loud noises, and evidencing implication of the cochlear portion of the eighth nerve; (2) the tendency to uncontrollable weeping; and (3) loss of memory. These symptoms are in constant association with chronic forms of vertigo of nasal origin. They point to extension of the reflexes to the vestibular branch of the eighth nerve supplying the end-organs of equilibration. That these symptoms were the outcome of reflex irritation, and were not due to central lesion, was evidenced by their immediate and complete cessation following on removal of the exciting cause.

The Treatment of the Fractures of the Shaft of the Humerus.

George Wilkinson (*Quarterly Medical Journal*, August) states that no other method of treatment gives a degree of fixation and a feeling of security to the patient equal to a properly applied shoulder cap. In those cases in which the arm is too tender to bear the small amount of manipulation necessary, the following method of splinting will be found useful. The elbow is flexed to a right angle, and the fingers, hand, and forearm bandaged with flannel bandages, the wrist being extended and the fingers flexed. A roller bandage may be

held in the hand. A "bandolier" sling is put on. The splints for the arm are now prepared. A paper pattern is first cut out, to fit the front, outside, and back of the arm, leaving plenty of room in front for the fixation of the elbow joint. A pad is next cut to the shape of the pattern; next, a piece of strapping is cut to the pattern, with the adhesive side inwards, but slightly wider. The straight splints are now cut, about one inch and a half wide, for the anterior, external, and posterior surfaces of the arm. The outer splint should reach from the great tuberosity of the humerus to just above the external condyle. These are fixed in position on the adhesive side of the strapping. A short internal splint of the same width should be cut, to reach from below the folds of the axilla to above the internal condyle, and should be well padded. The patient being seated in a chair, an assistant makes traction downward on the arm from the bend of the elbow so as to bring the fragments into position, and the padded splints are placed in position around the bone. Two pieces of strapping are next carried from the anterior and posterior splint over a pad on the top of the shoulder, and down on to the front and back of the chest respectively, to prevent the splints working down by their own weight, and causing pressure at the flexure of the elbow joint. The splints are fixed by two buckled straps carried tightly around the whole. Sufficient padding is placed between the chest wall and the internal splint to keep the arm from being pressed inwards out of the perpendicular. Where the hollow of the waists is well marked, as in women, a wedge-shaped pad with the base downwards should be used. The arm is then bandaged firmly to the side by a flannel roller encircling the chest. The points to be attended to are (1) that the arm hangs perpendicularly from the shoulder; (2) that the wrist is extended and the fingers flexed, and that the hand is not confined under the clothing; (3) that there is no pressure in the bend of the elbow; (4) that the internal splint does not press in the axilla; (5) that the external splint is of proper length, *i. e.*, extends from the great tuberosity to just above the external condyle. If it is shorter than this there is a tendency for the fragments to be bowed inwards when the arm is bandaged to the side. (6) In the after treatment passive movements of the wrist and fingers should be made each day, and the splints should be readjusted and tightened up as the swelling of the arm subsides.

Extrauterine Pregnancy After Treatment for Sterility by Uterine Drainage.

Gill Wylie (Amer. Jour. Obstet.) states that in 4 cases of sterile women under his treatment in 1900, extrauterine pregnancy followed dilatation of the uterine cavity, curettage, and prolonged use of the hard rubber drainage tube. In one case tubal pregnancy began three months after conclusion of the treatment, in the others about a year elapsed before rupture of the tube recalled the abnormal gestation. In the first 3 cases there was the usual pain, diagnosed in 2, however, as due to inflamed appendix; in all an operation was successfully performed. The fourth was specially remarkable as there had been a previous pregnancy in the opposite tube, for which the patient consulted the author. She had borne no child. He examined the pelvis, detected a mass on the right side, operated, and removed an ectopic tubal sac. For a few months afterwards she was kept under treatment for sterility. In June, 1901, her period ceased and hæmorrhage occurred. No physical sign of tubal gestation could be accurately defined, but a few weeks later the patient when dining at a restaurant was seized with characteristic symptoms, including hæmorrhage. Abdominal section was performed and ectopic gestation detected. He declared that there was no danger in drainage of the uterus by the hard rubber tube; he has employed it for over twenty years and never with any evil result. Dr. Wylie takes every precaution against sepsis. The patient is kept quiet for about five days, and there is no more irritation than is caused by the wearing of a hard rubber plate in the mouth. The perils of the old stem pessary are understood and avoided. As a rule, pregnancy perfectly normal in character followed the drainage treatment.

Asthma of Nasal Origin, Its Radical Cure.

Farrell (Illinois Medical Journal) accepts the idea that there is a general nervous predisposition to the disease, and that the paroxysm is brought about by irritation in the upper air passages. Although the nasal cavities may disclose nothing in particular at the time of examination, but if during an asthmatic attack an application of cocaine be made to a suspicious point, such as a turbinate resting against the septum, or a circumscribed edematous patch, the spasm would relax at once. In his experience 80 per cent. of such cases have been entirely cured, the remaining 20 per cent. benefited, by attention to some nasal condition.

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Treatment of Pelvic Cellulitis.

Rishmiller, (Northwestern Lancet) believes local therapeutics should naturally demand our first attention, this he briefly describes, and presents more at length the surgical details and technique. Patients with cellulitis, circumscribed and diffuse, present objective symptoms of such a varied character that it behooves the practitioner to make a thorough bimanual examination of all the pelvic organs, including the rectal, as well as a general physical examination, in order to map out a radical and practical plan of treatment. If the phlegmonous exudate in the connective tissue presents indications of suppuration, then, of course, the sooner an operation is undertaken for the evacuation of pus, the speedier will be the recovery, and the better for the welfare of the patient. Even in cases where no fluctuation can be elicited, the author does not hesitate to open the posterior vaginal fornix, and establish thorough drainage of the indurated mass. He says that he can get these patients with phlegmonous exudates without suppuration on their feet sooner, and have them comfortable by radically entering the inflammatory mass and establishing free gauze drainage, than by an expectant local treatment and procrastination.

These sweeping assertions are not meant to be interpreted as decrying medical gynecology. When undecided as to the feasibility of operative interference, vaginal medicated tamponade, from a week to ten days, will usually decide whether to continue local medication or to operate. Where there is an acrid leucorrheal discharge, excoriating the vaginal mucosa and external genitalia, his plan is to treat the patient daily, otherwise every second day. The patient should not be treated one day before or two days after menstruation. The writer no longer paints the vaginal fornices with Churchill's tincture of iodine, but uses a preparation of ichthyol and boroglycerin. With this he thoroughly saturates one or two tampons of absorbent cotton, and inserts them directly over the inflammatory focus. Next he inserts a flat tampon of non-absorbent cotton, mainly for keeping the former in close contact with the mucosa of the vaginal fornix. A profuse vaginal osmosis will ensue, and after four or five treatments it will be appreciably evident whether it is best to continue local treatment or not. Sometimes it happens that the ichthyol and tincture of iodine produce a too active counter-irritation. In such individuals he is in the habit of alternating the application with boroglyceride, and thereby preventing this excessive irritation.

As will be comprehended, any desired strength may be had from the above preparation by the simple addition of boroglyceride. This treatment is enhanced by rest in bed, thorough daily evacuation of the bowels, and hot douches (110 deg. F.) with Davidson's syringe, after the removal of the tampons, and again just before the next treatment.

The surgical treatment is not in the least hazardous, and the average practitioner with a general knowledge of surgical technique and asepsis, and with a due comprehension of the anatomical relations, will be sufficiently equipped to cure his patients. The patient should be examined, both before and immediately after she is under the influence of the anesthetic, as it will the better disclose the real conditions present by these two comparison examinations. The external genitalia should be shaved and the vagina antisepticized. The patient should be in the dorsal position, for it permits a better appreciation of the pelvic landmarks. Sim's broad speculum should be introduced to retract the posterior vaginal wall, and then the posterior cervix uteri should be grasped with a volsella forceps.

Some surgeons have a predilection for making the incision directly over the point of the abscess. If the suppurative accumulation is located on either side or posterior to the uterus, the author invariably makes his incision behind the cervix, and from there on makes way either to the right or left, as conditions dictate. His experience has convinced him that he can get better drainage by making the incision in the median line, and that he can to a certainty avoid entering vital structures. After having reached the pus focus the incision may be safely enlarged by Goodell's uterine dilator. Then the index finger should be introduced to break up all honeycombed abscesses, and furthermore, to detect and break up any larger accumulation more remotely situated.

It must be borne in mind that it is very characteristic for multiple small abscesses to develop in pelvic cellulitis, and as it is often exceedingly difficult to detect fluctuation, nevertheless none should be overlooked in being evacuated. When in doubt in such cases whether suppuration has taken place or not, he always feels on the safe side in establishing drainage. The abscess cavity should be irrigated first with bichloride of mercury, 1:2000, and then either with Thiersch's solution or with sterilized water. The cavity should be packed with plain sterilized gauze, or better still, with bichloride of mercury gauze. The gauzes should be removed on the second day, and the ab-

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“Clinical experience is demonstrating its great value in tuberculosis.”—Abstract in *Jour. Amer. Med. Assoc.*, Sept. 20, 1902.

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cess cavity should then be irrigated with a mild antiseptic solution.

Drainage should be encouraged diligently, and as broad a strip of gauze as can conveniently be introduced should be inserted. This treatment should be repeated daily until all discharge has disappeared, and the fistulous tract has healed from the bottom.

In rare cases, where we have to deal with pelvic abscesses so large as to point distinctly above Poupart's ligament, and which are situated mainly in the upper part of the pelvis, it is advisable to make the incision and establish a drainage from its most accessible situation. Entering the peritoneal cavity must be carefully avoided.

The general health must not be overlooked, and a bracing constitutional treatment should be instituted. Albeit, the surgical procedure is only the first step in the cure. Invariably the patients are anemic, and the number of red blood-corpuscles is below normal. These cases the author places on some organic iron, and has not had anything better than the solution of peptorate of iron and manganese with arsenic. These preparations he has tested clinically by red-blood count, and has found them satisfactory. Strychnine in 1-50 grain doses, *t. i. d.*, should not be omitted.

The Etiology of Infantile Paralysis.

Gossage, in the *American Journal Medical Sciences*, says: With the evidence at our disposal it is impossible to come to any definite conclusion as to the exact nature of the disease. Clinical records are very strongly in favor of at least two, and probably three or four, definite diseases being included under the term anterior poliomyelitis, viz:

1. That class where the paralysis comes on suddenly without previous ill-health.
2. That class where the onset of the paralysis is preceded by general symptoms, such as fever, vomiting, pain in the back, etc.
3. The epidemic class.
4. The adult class.

The three latter may possibly be the same disease which may sometimes occur sporadically and at other times in the form of an epidemic. Occasionally cases may occur sporadically which are like the epidemic cases, the disease having spread to the nerve centers in the brain and to the peripheral nerves, and in some of these death even has ensued.

The arguments against regarding hemorrhage into the gray matter of the cord as the cause of any of the cases of infantile paralysis and the question of thrombosis are thoroughly discussed. In spite, there-

fore, of the fact that a purely vascular lesion would best explain these striking cases where the onset is absolutely sudden without other signs of ill-health, one is compelled to regard such a cause as improbable. Of the two other possible ways by which the cells in the ventral horns might be destroyed, viz., a local inflammation or a primary degeneration of the nerve cells, it is impossible at present to quite ignore the latter. An acute degeneration of the nerve cells might be brought about by some poison circulating in the blood, and such a poison may be formed by the growth of the micro-organisms which are the causes of such diseases as scarlet fever or measles, or by the growth of a micro-organism which is specific to infantile paralysis. Such a primary degeneration of the nerve cells is a possible cause for some cases of infantile paralysis, but the evidence in its favor is very inconclusive. The one definite fact obtainable from the post-mortem examination of patients that have suffered from the disease is that in all recent cases there are signs of a local inflammation in the ventral horns. That these appearances are inflammatory and not due to vascular occlusion is rendered the more probable by the fact that the inflammation sometimes involves other parts than the ventral horns. For instance, Schultze found inflammation of the meninges in an otherwise typical case and he considered from clinical evidence that the association of meningitis with anterior poliomyelitis was not uncommon. The inflammation as a rule, however, seems to be confined to the distribution of the anterior spinal artery, and doubtless in the majority of cases thrombosis occurs very early and so explains the sudden or very rapid loss of power. This local inflammation, like so many inflammations not due to direct injury, is probably caused by a local growth of some micro-organisms.

The reputed association with the acute specific fevers would be better explained by supposing that there is a weakened resistance to the attack of other organisms left after these complaints, and such a lessening of resistance would also explain the undoubted frequency with which exposure to chill, damp, or fatigue precedes an attack of acute anterior poliomyelitis in the adult. It is probable therefore that the organism associated with anterior poliomyelitis is specific to that disease and is not concerned in the causation of any other morbid condition. Since there seem to be two or more definite diseases included under the name of infantile palsy, there would probably be two or more specific organisms. Beyond this it is at present impossible to go.

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Chronic Inflammation of the Pharyngeal Tonsil Without Interference with Nasal Breathing.

Robertson (Northwestern Lancet, Sept. 1, 1902) calls attention to a type of chronic inflammation of the pharyngeal tonsil which is not sufficient to cause obstruction to respiration, but which represents a low grade of chronic inflammation, pouring out its secretion into the naso-pharynx, giving rise to a post-nasal catarrh which is extremely obstinate and causing various reflex disturbances, and in many cases giving rise at intervals to a subacute eustachian salpingitis or to an acute otitis media.

In this form of inflammation the symptoms differ from those present with an obstructive hypertrophy (as in the case in the adenoid vegetations in children), and the principal condition for which the patient seeks relief may be an obstinate and chronic post-nasal catarrh, sometimes accompanied by a stubborn cough, with expectoration and a constant irritation of the throat. On inspection the pharyngeal tonsil appears but slightly enlarged, is firm, and is usually covered with a mucous secretion. The nasal passages, unless there is an accompanying chronic rhinitis or hypertrophied turbinates, are usually free from secretion; but there is present a chronic discharge which may find its way forward into the nasal cavities, or, dropping down, may excite a laryngitis or bronchitis. It is attended on the patient's part by a hawking and spitting on rising in the morning in the effort to clear the throat from the accumulated discharge, which has become tenacious and dry.

The most frequent complication accompanying a chronic inflammation of the pharyngeal tonsil is the tendency to acute congestion of the gland with involvement of the nasal passages, or, as the patient states, repeated "colds in the head," during which there may be a closure of the eustachian tubes, or direct involvement of the eustachian tubes may occur from the presence of the muco-purulent secretion in the naso-pharynx, or the ear involvement may progress into a chronic otitis media.

The treatment in these cases consists chiefly in the *thorough* removal of the diseased gland by means of the curette and forceps, followed by topical treatment of the form of cleansing and stimulating applications. In many cases constitutional treatment in the form of tonics, etc., will be found necessary.

The author has reached the following conclusions:

1. That a chronic inflammation of the pharyngeal tonsil may exist without any obstruction to nasal breathing.

2. That many cases of post-nasal catarrh are due to the presence of a chronically inflamed pharyngeal tonsil.

3. That some cases of acute and chronic otitis media have their origin in an eustachian salpingitis which was due to a low grade of inflammation of the pharyngeal tonsil.

4. That in the treatment of some cases of chronic otitis media the source of the trouble may be overlooked and no permanent improvement will follow until the underlying cause be removed.

5. That if the presence of a chronically inflamed pharyngeal tonsil were more generally recognized and thoroughly removed there would be fewer cases of otitis media.

Radiotherapy for Cancer and Other Diseases.

Morton in the Medical Record says that in his opinion:

1. Radiotherapy broadens our conceptions of the possibilities of the therapeutics of modern medical science.

2. The x-ray has a general application for the relief of pain.

3. As to technique, a standardization as to apparatus and its capacity, and as to duration and frequency of treatment and distance of the tube, is recommended to operators.

4. The x-ray has a curative effect in internal cancer and other internal diseases.

5. For superficial diseases a medium soft tube may be used, for internal cases a hard tube. The hard tube is applicable, however, in all cases.

6. X-radiation is recommended prior to any operation, to clear the tissue of cancer particles and foci, and to circumscribe the disease.

7. X-radiation is recommended after operation to preclude a recurrence.

8. X-radiation may be recommended in place of an operation, and may be preferable to one for the reason that operation secures but a comparatively moderate percentage of permanent recoveries, and because up to date the x-ray procedure shows a continued improvement in cases, and a percentage of cures which will undoubtedly compare favorably with surgical operations.

9. There is danger to the patient or uncertainty as to what might be accomplished when the x-ray is employed by immature operators.

10. In x-radiation we possess more nearly a solution of the problem of curing cancer than by any other method of treatment.

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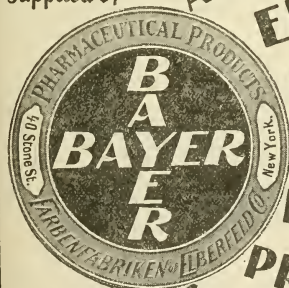
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Subparietal Rupture of the Kidney.

Davis (Ann. Surgery, September, 1902) reports a case of subparietal rupture of the kidney, on which was first done a nephrotomy and afterwards nephrectomy, with a good recovery. He considers thirty-three cases which he has collected from literature, and having discussed the etiology, prognosis, diagnosis and treatment of the condition, quotes the opinions of various surgeons as to the advisability of suturing the kidney wound after nephrotomy.

A few of his conclusions are as follows:

1. That the reduction in the mortality since Keen's report has been largely due to improved technique.

2. That expectant plan of treatment is permissible in cases where slight hematuria is the only symptom. Tumefaction, much blood in the urine, severe pain and history of great injury, each is a positive indication for prompt operative intervention.

3. Early operation should be done in all cases where the history of the case and the symptoms point to serious injury of the kidney. (a) Nephrotomy, with gauze tamponade, where the patient has not lost enough blood, so that little subsequent hemorrhage would not endanger life. (b) Nephrectomy, where the kidney is irreparably injured, and in less extensive injuries where either sepsis or hemorrhage is likely to prove fatal.

4. In delayed cases it may be difficult or impossible to know just what is best to do. Every phase of the case must be considered and then, if in doubt, operate.

5. Shock is the violent disturbance of the nervous system immediately consequent upon injury. While this is some ground for hesitation in those cases of true shock, most of the cases described as shock are depression of the vital force from hemorrhage or sepsis, and nothing short of prompt surgical intervention will prevent collapse.

6. Operate on the history of the case rather than wait for symptoms which may only suggest what should have been done earlier, but at last proclaim without hope for relief,

Blood-Diagnosis Between Typhoid and Malarial Remittent Fevers.

Rogers (British Medical Journal) says:

1. The percentage of the different forms of leucocytes counted in the stained blood-film is of great diagnostic value in diagnosing typhoid and malarial remittent fevers, and is easily ascertained.

2. An increase of the lymphocytes to 40 per cent. or over, without any increase in the large uninuclears, points to typhoid as against malarial fever.

3. An increase in the large uninuclears to about 12 per cent. and upward, especial-

ly during the remissions of the temperature, strongly indicates malaria as against typhoid fever. This change is of great value when parasites are absent from the blood.

4. The presence of myelocytes in any number, such as from 1 to 5 per cent., points to malaria as against typhoid fever.

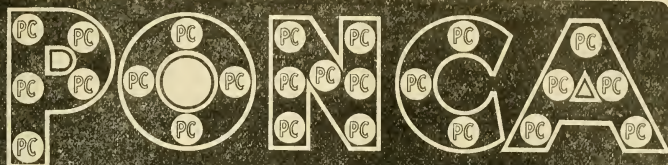
5. A high degree of anæmia, such a reduction of the red corpuscles below three million per cubic millimeter, is much more frequently met with in malaria than in typhoid fever.

6. A very great reduction in the total leucocyte-count, such as to below two thousand per cubic millimeter, is much more frequently met with in malarial than in typhoid fever, while the proportion of white to red corpuscles in malaria is not infrequently less than one to two thousand, which is rare in typhoid fever.

7. Leucocytosis can be detected by the presence of a great excess of white corpuscles, upward of 80 per cent. of which are multinuclears, in a stained blood-film, and is often of service in excluding malaria in intermittent fever due to liver-abscess or other local inflammation.

On the Avoidance of Shock in Major Amputations by Cocainization of Large Nerve Trunks Preliminary to Their Division.

Cushing (Annals of Surgery, September, 1902) says that the diminution of arterial tension is the characteristic feature of shock, and while slight injuries to an extremity cause an increase in said tension, very severe ones cause a decrease of the same. When a certain amount of shock already exists, there is especial danger in the division of sensory nerve trunks. Cocain injection, by blocking the centripetal influences, effectually keeps down shock from this source. In one case described by the author the pulse jumped from 110 to 150 upon the division of the brachial plexus, no cocain being used. In a second, where the same thing was done after the drug had been introduced, there was absolutely no shock. When peripheral mixed nerves are put on a stretch there is an acceleration of cardiac rhythm, indicative of a reflex pressor effect. However, this may be followed by lowering of pressure if the trauma be too extensive. In extensive traumata to extremities the author advises other and early operation (with cocain as above) to aid the patient of the influences which tend to increase the already existing shock. Arterial tension cannot be judged by the finger on the pulse, but an instrument has been devised for the purpose. There are appended several charts which show the variance of the blood pressure during operations.



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Myelopathic Albumosuria.

Bradshaw (The London Lancet, Oct. 4, 1902) designates a group of cases characterized by albumose in the urine and some affection of the bone marrow by this term. The cause is unknown. The changes in the skeleton consist in the invasion of certain bones by a soft mass of new growth, the osseous tissue proper undergoing absorption. The new growth is red, soft, and gelatinous, looking like red marrow. It shows chiefly round cells with little or no intercellular substance. In structure and course of development it resembles sarcoma. The urine contains a proteid closely resembling albumin, but differing from albumin in certain particulars, of which the following are the most obvious: (1) It coagulates at a remarkably low temperature, viz., 58 deg. C.; (2) the coagulum is, to a great extent, dissolved at the boiling point and reappears on cooling; (3) the coagulum which forms on treatment with cold nitric acid also dissolves on boiling and returns on cooling; and (4) it is readily coagulated by hydrochloric acid. The symptoms are those of progressive asthenia, accompanied by pains in the back and side suggesting rheumatism or neuralgia. The pains shift their position and vary in intensity. Swellings are found on the bones—or they are yielding to manipulation, and the x-ray may show an interruption of continuity. The prognosis is always bad. Concerning the peculiar substance, in the urine, we only know that it resembles albumin. As regards the mode of formation of the substance, three different views have been put forward: (1) The old view was that it is derived directly from the proteid constituents of the food, which, for some reason, fail to undergo the formal metabolism. This view ignores the fact which lies at the root of the whole problem, viz., the association of the albumose with disease of the bones and marrow. (2) Another view is that the albuminose is produced by some abnormal metabolism taking place in connection with the new growths in the bones. How this could happen is at present a matter of pure conjecture, but it might conceivably take place through the action of a ferment. (3) Finally, it has been suggested recently that the formation of the albumose takes place as the result of the loss of some function of the bone marrow, owing to the destruction of the latter. He believes that the second of the theories best explains the phenomena of the disease.

Shall We make our Consumptives Social Outcasts?

J. Howe Adams, in the Medical Age, says that in a region of the Adirondacks where, until two years ago, consumptives were

treated with consideration and kindness, they are shunned and ostracized, and many hotels are announcing that no consumptives are taken. The feeling is not confined to the Adirondacks. We find legislatures of States seriously considering the exclusion of foreign consumptives; we find railroad directors studying the idea of separate cars for consumptives. Before we know it we shall have this unfortunate in the same class with the leper. The author suggests that local boards of health find the unsanitary spots, the unhealthy houses in the various cities, watch them; have them rebuilt and improved—register places, and not people. Too much stress has been laid on expectoration as practically the sole source of infection. Caged animals in zoological gardens are peculiarly liable to tuberculosis, and yet they are not spitting animals.

How Shall We Treat Sepsis Following Abortion or Labor?

Henry, in the Medical News, summarizes his views on the subject as follows:

1. Remove early with the finger, sharp curette, and flushing, all debris, decidua, blood-clots and sloughing tissue which may be infected, from the uterus and from all raw surfaces of cervix, vagina, and vulva.
2. Dry all of these raw surfaces and apply freely to them the 95 per cent. carbolic acid, washing away the surplus with sterile water.
3. Unless hemorrhage require, leave no tubes or packing of any kind in either vagina or uterus.
4. Have a simple carbolized 2 per cent. vaginal douche used twice a day.
5. Open the bowels freely with calomel ($\frac{1}{2}$ grain every hour for four hours), to be followed by Rochelle salts until sufficient action has occurred.
6. Give quinine, 3 grains every four hours, followed by tincture of the chloride of iron, 15 drops, in water.
7. Give good nourishment, with milk, eggs, and stimulants, every four hours.
8. Let this be the routine early treatment.
9. When fixation of the uterus occurs and infiltration takes place in Douglas's cul-de-sac or in the broad ligaments, or when the tubes or ovaries fill with pus in acute cases, open promptly and drain through the vagina.
10. If multiple abscesses occur in the uterine walls, if the walls become badly infected, or if necessary in order to secure perfect drainage for a badly infected pelvic cavity, remove the uterus and all else necessary by the vaginal route.

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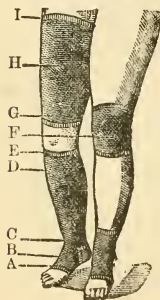
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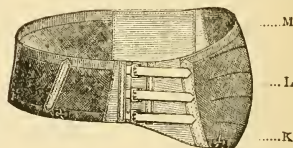
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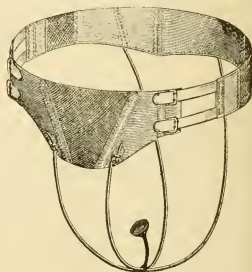
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Fibroma of the Ovary Associated with Ascites.

Theodore A. Erck, (Obstetrical Society of Philadelphia, Oct. 2, 1902) reported a case of a married woman 24 years of age. Married 5 years and has 1 child 4 years of age. About a year or so ago the patient noticed that the menstrual periods were irregular as to the time of their appearance, and the flow scant. In May, 1901, an abdominal enlargement was noticed, and although the menstrual periods were regular, the amount of blood lost had become so small, that she imagined she was pregnant. Examination revealed the abdomen greatly distended with free fluid, though the walls were not tense. A hard nodular mass about the size of a cocoanut occupied the hypogastrium, which by combined examination was found to be freely movable and not connected with the uterus. Laparotomy was performed. Several gallons of a clear straw colored fluid were evacuated from the abdominal cavity, and both ovaries removed. The Pathologist pronounced the growth which involved the right ovary as a fibroma; and the opposite ovary sclerotic and cystic. The patient made an uninterrupted recovery. It seems more likely the ascites is due to something intrinsic in ovarian growths, perhaps a secretion.

The Use of Hot Air in Nephritis.

Skinner (Journal of Advanced Therapeutics, September, 1902) recommends the use of dry hot air in this disease. He claims the following advantages:

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Secondly, the accomplishment of this result without the aid of, and more efficiently than is possible with, drugs; hence avoidance of the deleterious after-effects not infrequently dependent upon the use of the latter.

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Soil, Fabrics and Files in Enteric Infection.

Firth and Horrocks (British Medical Journal, Sept. 27, 1902) draw the following conclusions: "1. That there is no evidence to show that the enteric bacillus, when placed in soil, displays any disposition or ability to either increase in numbers or grow upward, downward or laterally. 2. That the enteric bacillus can be washed through at least eighteen inches of soil by means of water, even when the soil is closely packed down and no fissures or cracks allowed to exist. 3. That the enteric bacillus is able to assume a vegetative existence in ordinary and sewage polluted soil and survive therein for varying periods, amounting in some cases to as much as seventy-four days. 4. That the presence or absence of organic nutritive material in the soil appears to be a largely negligible factor, since the enteric bacillus can survive in a soil indifferently well, whether it be an organically polluted soil or a virgin soil, and whether it receive dilute sewage or merely rainwater. 5. That an excess or great deficiency of moisture in soils appears to be the dominant factor affecting the chances of survival of the enteric bacillus in, or at least the possibility of recovering it from soil. 6. That from fine sand allowed to become dry, the enteric bacillus can be recovered on the twenty-fifth day after inoculation. 7. That from fine sand, kept moist with either rain or dilute sewage, the enteric bacillus can not be recovered later than the twelfth day after fouling; this inability to recover the organism is due probably not so much to its death as to its being washed down into the deeper sand layers by liquids added. 8. That in peat, the enteric bacillus appears to rapidly die out, as the microbe can not be recovered from it after the thirteenth day; but this soil is so porous that it is quite possible that the micro-organism was washed down into the deeper parts and consequently not recoverable from the place of inoculation. 9. That from ordinary soil kept damp by occasional additions of rain water the enteric bacillus can be recovered up to and on the sixty-seventh day. 10. That from a similar soil kept damp by occasional additions of dilute raw sewage, the enteric bacillus is recoverable up to the thirty-fifth day. 11. That from a similar soil kept damp by occasional additions of dilute sterile sewage the enteric bacillus is recoverable up to the seventy-fourth day. 12. That in a similar soil, after heavy rainfall, the enteric bacillus at once disappears from the surface layers. 13. That from a similar soil, allowed after inoculation to become so dry as to be readily blown about as dust, the enteric bacillus

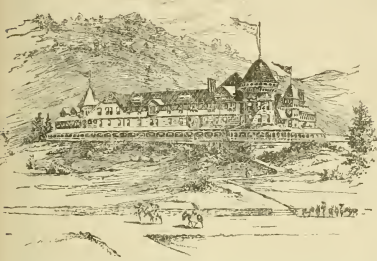
can be recovered up to and on the twenty-fifth day; and that enteric infective material can be readily translated from dried soil and sand by means of winds and air currents. 14. That in a sewage polluted soil recovered from beneath a broken drain, the enteric bacillus is able to survive up to the sixty-fifth day. 15. That from a piece of khaki drill, inoculated with an emulsion of the enteric bacillus and then allowed to become quite dry, the micro-organism is recoverable up to and on the seventy-fourth day. 16. That from a piece of khaki serge, similarly treated, the enteric bacillus is recoverable on the seventy-eighth day. 17. That from a piece of khaki drill fouled by liquid enteric feces and then allowed to dry, the micro-organism is recoverable on the seventeenth day. 18. That from a similar fabric fouled by solid or semi-solid enteric feces and then allowed to dry, the micro-organism is recoverable up to the ninth day. 19. That the enteric bacillus is able to survive in surface soil an exposure to 122 hours of direct sunshine, extending over a period of twenty-two consecutive days. That from a piece of infected serge the enteric bacillus is recoverable after the fabric has been exposed to fifty hours of direct sunshine spread over a period of ten days. 21. That ordinary house flies (*Musca domestica*) can convey enteric infective matter from specific excreta or other polluted material to objects on which they may walk, rest or feed. That such infective matter appears to be attached not only to their heads (mandibles probably) but also to their legs, wings and bodies. It has not been proved that the enteric bacillus passed through the digestive tract of the fly." They deduce a number of practical conclusions from these, namely, that the dry earth or pail-closet system has many dangerous possibilities, and that in the water carrying system of sewage, the danger of local infection is slight, but the danger commences at the termination of the outlet. He also remarks on the dangers of local infection in connection with dormitories, barracks and the especial difficulties which these indicate in the tropics.

Localization of the Mental Faculties in the Left Prefrontal Lobe.

Charles Phelps (American Journal of the Medical Sciences) has collected a number of cases in which the frontal lobes have been injured. In 8 cases of left hemiatrophy the patients showed marked impairment of mental function. In 2 cases of right hemiatrophy the intelligence was practically normal, although one of the patients was an epileptic. Phelps has collected 110 cases of pistol injuries of the frontal lobes, 26 limited to the right and 24 to the left

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frontal lobes. None of the 26 presented any symptoms of mental or emotional disturbance aside from those characteristic of general contusion. In 13 of the 24 cases in which the ball injured the left lobe manifestations of mental derangement were distinctly evident. Phelps has also collected 137 cases of limited lesion of the frontal lobe, of which 98 were suitable for analysis. Fifty-one involved the left lobe, 34 the right and 13 both lobes. In all cases the situation of the lesion was verified by autopsy. Of the 51 cases limited to the left lobe 46 presented symptoms of mental disorder and 5 did not. Eleven cases in which both lobes were involved showed symptoms similar to those of disease of the lobe; of the 34 in which the right frontal lobe was involved 24 showed no form of mental impairment; 10 showed distinct mental symptoms. The writer concludes with an analysis of these statistics, some discussion of the subject and mentions an experiment performed by Bianchi upon a female monkey, in which after the removal of the right frontal lobe few changes were observed after the removal of the left frontal lobe the animal became stupid and apathetic. The author thinks that his studies justify 3 propositions: (1) The more absolutely the lesion is limited to the left, the more positive are the symptoms. (2) The integrity of the mental faculties remains unimpaired in right frontal lesion, though it involves the destruction of the entire lobe, or even extends to the entire hemisphere. (3) The exceptional instance, in which seemingly opposite conditions exist are always reconcilable, on more careful examination, with the assertion of an exclusive control of the mental faculties residing in the prefrontal region of the left side.

Pernicious Anemia.

Warthin, in the American Journal of the Medical Science, October, 1902, concludes a valuable paper as follows: "1. Pernicious anemia is essentially a hemolytic disease, the hemolysis being due to some as yet unknown poison comparable in its effect on the blood and blood organs to the action of toluylene-diamine—whether autointoxication of infection, remains yet to be determined. 2. The poison of pernicious anemia stimulates the phagocytes of the spleen, lymph and hemolymph glands, and bone marrow to increased hemolysis (cellular hemolysis). Either the phagocytes are directly stimulated to increased destruction of red cells, or the latter are so changed by the poison that they themselves stimulate the phagocytes. The hemolysis of perni-

cious anemia differs only in degree, not in kind, from normal hemolysis or the pathological increase occurring in sepsis, typhoid, etc. 3. It is not improbable that from the destruction of hemoglobin poisonous products (histon?) may be formed which have also a hemolytic action—a vicious circle of hemolysis may thus be produced. No proof of this exists at present. 4. The hemolysis of pernicious anemia is not confined to the portal area, as according to Hunter, but in some cases at least takes place also to a large extent to the prevertebral lymph and hemolymph nodes and bone marrow. In the majority of cases the spleen is the chief seat of the blood destruction. No evidences of hemolysis in the liver, stomach, and intestinal capillaries were found in the eight cases. The hemosiderin of the liver and kidneys is carried to these organs as some soluble derivative of hemoglobin, is removed from the circulation as hemosiderin by the endothelium, and then transferred to the liver or kidney cells. The deposit of iron in these organs is of the nature of an excretion. 5. In the majority of cases only slight reaction for iron is found at the sites of actual hemolysis (spleen, lymph and hemolymph glands and bone marrow). The greater part of the pigment in the phagocytes of the spleen, lymph and hemolymph glands does not give an iron reaction while in a diffuse form. When changed to a granular pigment the iron reaction may usually be obtained. The change to hemosiderin is for the greater part accomplished by the endothelium of the liver and kidneys. 6. The varying pathological conditions found in these different cases of pernicious anemia can be explained only by a theory of cyclical or intermittent process of hemolysis. This theory is also born out by the exacerbations so frequently seen clinically. The autopsy findings, in so far as evidences of hemolysis are concerned, will depend on the relation between the time of death and the stage of the hemolysis. 7. The changes in the hemolymph glands found constantly in these eight cases were: dilatation of the blood sinuses and evidences of increased hemolysis, as shown by the increased number of phagocytes containing disintegrating red cells and blood pigment. In some of the cases these changes were accompanied by great increase in size and apparent increase in the number of hemolymph glands; in other cases there was no hyperplasia, the only evidence of the changes present being that obtained by the microscopic examination. The changes found can not be regarded as a specific of pernicious anemia, since it is probable that they may be produced by other infections or

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toxic processes characterized by great hemolysis. 8. The lymphoid and megakaryoblastic changes in the bone marrow do not form an essential part of the pathology of pernicious anemia, and are to be regarded as of a compensatory nature—an increased activity of red-cell formation to supply the deficiency caused by the excessive hemolysis."

Some Morbid Conditions of the Mouth.

Roughton, in the London Lancet, September 27th, 1902, discusses dental caries, the pain caused thereby, and the reflex neuroses of dental origin. There are about six species of bacterial organisms which seem to find the conditions of the mouth exactly to their liking; they flourish and crowd out all others. Among them are leptothrix, jointed bacilli, micrococci, tetrads, and Klein's vibrio. These organisms aid in digestion, but also may do harm; in this paper the author deals with some of the morbid conditions which they produce. The mouth bacteria are the direct cause of dental caries; certain of them possess the power of forming acids (chiefly lactic acid) which acting upon the lime salts of the enamel, disintegrate it and thus permit the entrance of organisms into the dentinal tubules, where they continue the process by dissolving the lime salts from the dentine; and afterwards, certain other bacteria liquefy, peptonize, or digest the basic substance, thus removing the organic tissue and forming a cavity of decay. The most generally recognized symptom or effect of dental caries is pain. Extensive caries may be present without toothache as long as the person is in good health, but diseased teeth are prone to ache when the patient's health is deranged. It is quite common for the pain due to a diseased tooth to be referred to a neighboring tooth which is quite sound, to the other jaw, or to a region remote from the mouth (earache, or facial neuralgia). As a rule, the recognition of the nature of a case of remote dental pain is not difficult. But each tooth should be examined separately, and cavities hidden in the interstices or below the gum must be sought for. Percussing the teeth with a steel instrument and syringing with cold water are useful means of diagnosis. The most difficult cases to diagnose are those in which isolated nodules of secondary dentine occur in the pulps of externally healthy teeth. Such a condition may cause severe neuralgia and can only be recognized after the tooth has been extracted and split open. There are many conditions which cause healthy teeth to ache or seem to ache; inflammation of the antrum, syphilitic nodes, and exotoses or other lesions of the fifth

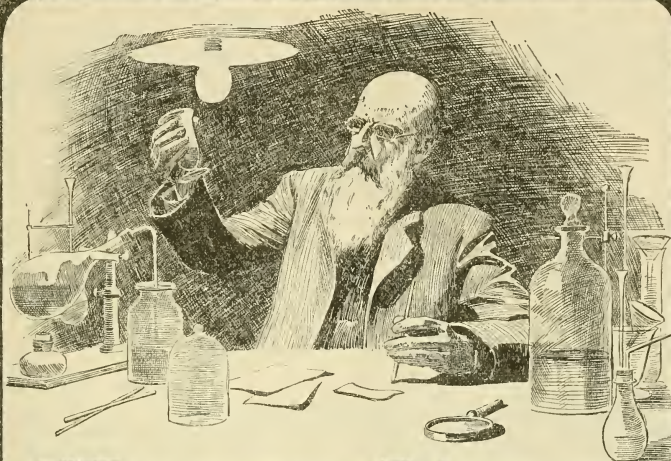
nerve. The term "neuralgia" should be reserved for those cases where there is no discoverable lesion.

Reflex spasm may be due to dental disease. Trismus or inability to open the mouth may be due to spasm of the masticatory muscles due to an impacted lower wisdom tooth. But, although muscular spasm may be due to dental irritation, it is very doubtful whether paresis or paralysis is ever due to the same cause. It is also extremely doubtful whether any actual eye or ear disease is really a reflex dental neurosis.

The Therapeutic Value of the Internal Use of Carbolic Acid.

Dessau, in Pediatrics gives his experience with the therapeutic effects of carbolic acid in the treatment of catarrhal complaints involving the respiratory tract. From the peculiar clinical picture presented in these cases, there was the best reasons for attributing them to a specific origin, viz., the influenza bacillus. By far the larger number of his patients thus affected have been infants and children, but he has also treated many adults similarly affected, where the complex of symptoms was easily recognized as influenza. The group of symptoms to which he refers in children comprise a dry, aggravating cough, sometimes becoming paroxysmal, with little or no expectoration, and that of a tenacious, viscid character when present, being seldom or never mucopurulent. The physical signs in the lungs show few or no rales, those heard varying in size and are of a dry, adhesive quality, even after the cough has existed for many days. Frequently in the younger children there may be heard in the interscapular spaces an indefinite harsh quality of the respiratory murmur that may well be compared to the broncho-vesicular murmur of Flint. The cough may or may not be associated with a coryza, sometimes exorivative; or a pharyngitis, a post-nasal catarrh, a conjunctivitis, or even an otitis media. There may also be a marked rise of temperature lasting for a number of days after the onset of the affection. The most notable feature of these various symptoms is their persistency and tendency to alternate with each other as a recrudescence of the trouble. Intestinal symptoms may in this manner alternate with those of the respiratory function. In a few cases complications of pneumonia and pleurisy have been observed.

All such cases as these have been treated almost entirely with the one remedy—carbolic acid, with better and quicker results than any other treatment he has used, and these have been many. Especially are the results most satisfactory in those cases where it is almost impossible to keep the little patients in bed. The method of ad-



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ministering carbolic acid he thinks safest is in the form of a solution of the strength of 1, 2, 3 and 5 per cent. The dose given is according to the age of the patient—an infant under 1 year of age receiving a teaspoonful of the 1 per cent. solution every two hours, while a child of 5 years may get the same dose of a 5 per cent. solution. A small amount of glycerin aids in preparing a more complete solution, and lately he has used cinnamon water as an expedient to aid in disguising the pungency of the acid. Only the chemically pure acid should be ordered for internal use.

Cystic Degeneration of the Ovaries.

Goldspohn (American Journal Obstetrics, September, 1902) concludes that the weight of authority is in favor of the retention-cyst theory, and that the condition is most generally the result of inflammatory processes, evidences of which are usually present in other parts of the ovary or in its surroundings. In scores of cases he has been able to observe the following succession of events: "1. Bimanual examination or compression of an ovary, directly exciting or aggravating a pain, mostly in the inguinal region, loin, or hip, or in a limited intercostal area of the same side, and much more frequently on the left than the right side. 2. Removal of one or more of these follicle cysts by exsection and closure of the gap. Sometimes also an incidental improvement in the location of the ovary, as when operating for retroversion of the uterus. 3. An immediate, occasionally a gradual, but permanent cessation of the pain. These events, occurring in the same succession in, say, seventy-five similar cases, must have more than the mere *post-hoc* relation to each other in the majority of cases. Nor can the results be accounted for among sensible men, by the old platitude of the mere suggestive effect of an operation."

Nephrectomy.

Robert G. Le Conte (Therapeutic Gazette, Sept. 15, 1902) concludes an article as follows:

1. With modern methods the immediate mortality of the operation should be reduced to 15 per cent. or even a little lower.

2. Operation should prolong the average duration of life, dating from the first symptom of the disease.

3. The percentage of cases that will go three years or more without a sign of recurrence—the so-called cures—will be very greatly increased if the physician can make an early diagnosis and can be assured of the fact that an immediate operation is proper and justifiable.

4. When the ultimate results are fatal, the operation relieves the suffering of the patient, and makes death less painful.

Twenty years ago cancer of the breast was considered an almost hopeless condition by both the physician and the surgeon. But how different are our views to-day, since surgery has proved that many cures can be effected when the disease is seen early and the removal is thorough.

Perhaps in the future the same brilliant results may be recorded for this operation, when the profession has concluded that the operation is justifiable, and gives a reasonable chance for a cure. At present the status of the operation is certainly very much better than the English opinion of it as voiced by Keith. He states that "in young children it is doubtful whether it is ever right to operate; indeed such operations must be looked upon as surgical possibilities rather than as operations of advantage to the patient." By way of retort Abbe might point with pride to two of his cases, one aged 14 months and the other 2½ years, both of whom were living and well at the end of three and a half and four years respectively.

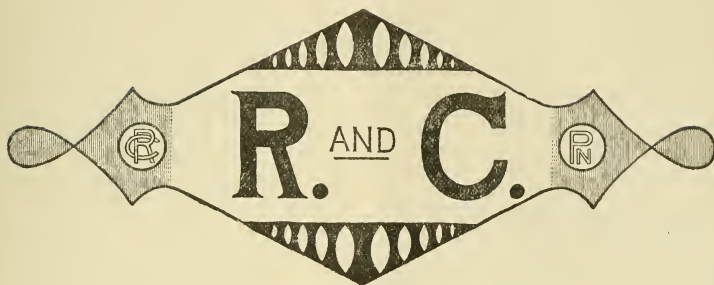
ADVERTISEMENTS.

A Notable Improvement in the Therapy of Typhoid Fever.

The discovery, by Duval of Bassett, of the presence of the bacillus dysenteriae (Shiga) in forty cases of infantile summer diarrhea, awakens renewed interest in the subject of intestinal antiseptics. But a few months have elapsed since Drs. P. C. Freer and F. G. Novy, of the University of Michigan, demonstrated the enormous germicidal power of benzoyl-acetyl-peroxide, more familiarly known as Acetozone. Although the preliminary reports of these investigators were of necessity based upon results of laboratory experiments, their expectations are already being realized in clinical work, in the treatment of typhoid fever, particularly.

In the City of Chicago, where a large number of cases of typhoid have been reported, Acetozone has been used exclusively in the treatment of about 300 of them. The consensus of opinion is that it causes the temperature to decline earlier than usual in the course of the disease, and it ameliorates the mental and physical condition of the patient, in all probability by controlling the toxemia.

Two Chicago practitioners, I. A. Abt, M. D., and E. Lackner, M. D., have thus far reported (Therapeutic Gazette, October 1902) forty cases of typhoid, in children,



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treated with Acetozone, with but two deaths, a mortality of 5 per cent. One of the patients that died succumbed to pneumonia and pulmonary edema, the other to great pyrexia on the fifth day. Stupor and tympanites were almost entirely absent in all the cases; the characteristic typhoid fetor of the stools was markedly diminished, and the hemorrhage occurred but twice, and in the same case. The average duration of the febrile period, in 37 cases, after beginning Acetozone treatment, was $13\frac{1}{2}$ days. The drug did not seem to act upon the heart or respiratory apparatus.

Early this year Eugene Wasdin, M. D., of the U. S. Marine Hospital Service, Buffalo, N. Y., reported 27 cases (American Medicine, Feb. 8, 1902) of typhoid fever, 24 of which were treated with Acetozone, all of the patients recovering. The writer says: "Its application in typhoid fever has been followed by very happy results; its use has been directed to the destruction of the germ in its primary lung colony and also in its secondary intestinal colony, and it has been used by hypodermoclysis to combat terminal expressions, with the result that in 24 cases the disease has been limited almost entirely to the expression of intoxication from the primary focus, the intestinal symptoms remaining entirely in abeyance, and the disease has been shorn of many of its most disagreeable features."

In a second paper, which appeared in the Therapeutic Gazette, for May, 15, 1902, the same writer states that his patients were given from 1,500 to 2,000 Cc. of the aqueous solution of Acetozone daily. The diet was milk diluted with the same solution. The first influence of the drug is observed in the increased secretion of urine. That this is not due wholly to the ingestion of large quantities of water, necessitated by the use of the saturated solution is evident from the author's assertion that the same result was observed when Acetozone was administered in capsules. The second influence to which attention is directed is the very pronounced decrease of the odor of the stools, while plate cultures from the dejecta showed comparatively few germs.

The deodorant and diuretic effects of Acetozone were also observed by G. H. Westinghouse, M. D., of Buffalo, (Buffalo Medical Journal, Aug. 1902) who used it in seven cases. This observer remarks that with the increased flow of urine "a corresponding reduction of typhoid symptoms followed, and tympanites and delirium disappeared." It should be remarked that the diagnosis in all these cases, as well as in most of those reported by the Chicago physicians, was confirmed by Widal's reaction and Ehrlich's test, and in some a blood-

count was resorted to. Westinghouse concludes his paper by saying that "Acetozone, as an intestinal antiseptic, is unequaled by anything I have ever employed. A complete subsidence of all the bowel symptoms followed in every case of typhoid within a few days after beginning its use. The application of the antiseptic consisted, in most cases, in simply allowing the patient to drink the saturated aqueous solution ad libitum; or, in other words, substituting this solution for all other liquids, and urging the patient to partake of it freely when the natural craving was not sufficient to insure the consumption of considerable quantities."

Coca as a Heart Tonic.

We are accustomed to consider the term stimulant as a something which acts as whip to goad the animal on to greater physical exertion, following which there is a corresponding period of depression. Whether this be true or not, there are conditions where any means may be allowable, and necessary as in passing some slough of extreme emergency when the physician stakes all on the success of his measures. Properly such an application of stimulant belongs only to an alcoholic, but owing to the paucity of terms in concise definition, other substances are also pronounced to be stimulants which do not possess these qualities. Because of this association of terms in substances differing in properties they are all commonly considered as of identical action with alcohol. Coca is therapeutically classed as a nervous-stimulant, but, unlike any other substance, its use is not followed by depression. The action of Coca is unique. Primarily it affects the cerebral cells but with this it has a depurative influence on the blood, freeing the circulation from waste, and because of this rendering the possibilities for repair in every organ of the body favorable.

Owing to the subtle action of Coca on the muscular structure, it has rightly been advocated in disease of the heart associated with muscular deficiency. Unlike digitalis it does not simply increase muscular power, an effect which in certain cases might be a disadvantage, but by a chemico-physiological change induced in the muscular substance it aids toward repair, a process which is augmented through a purified blood stream. The ideal of a tonic-stimulant the use of which tends to the permanent betterment of any depressed condition, is presented in Vin Mariani, which embraces the true qualities of the whole Coca leaf, selected under special facilities, and scientifically preserved in a mild and wholesome wine,

Drainage After Abdominal Section.*

By Stuart McGuire, M. D., Professor of Principles of Surgery and Clinical Surgery, University College of Medicine; Surgeon in Charge St. Luke's Hospital; Visiting Surgeon Virginia Hospital, etc., Richmond, Va.

Many writers state that drainage after abdominal section is an admission of the present imperfect state of surgery, and an acknowledgement of failure to fulfill the indications for which the operation was performed. All, however, admit that in certain cases drainage is necessary, or in other words, that some cases will recover with drainage that would die without it. If drainage saves life its employment requires no defense, and the apologetic tone in which it is referred to is misleading and unjust.

The *fin de siècle* rubber gloved gynecologist, operating on chronic cases and removing pathologic specimens, which if not of respectable origin are at least of respectable antiquity, may be able to report a series of a hundred successful sections without drainage, but the general surgeon, dealing with acute peritoneal infections, from a gangrenous gallbladder, a perforated bowel, or a ruptured appendix, must provide for drainage, or his patients will die. It is not a theory but a condition which confronts him, and its solution should not be termed a necessary evil but a life saving measure.

It is undoubtedly true that with increased experience and greater perfection of operative technique all surgeons find fewer and fewer cases requiring drainage. Still they follow the old rule, when in doubt drain; the only difference is that they do not doubt as often.

It is a fallacy to hold that the experience of one generation is a legacy to the succeeding one, and it will prove disastrous—at least in this instance—for the comparatively inexperienced surgeon to adopt the conclusions of the masters in the profession; to equal their confidence without equaling their skill and judgment; to cease to doubt and hence cease to drain.

The early success in abdominal surgery was largely achieved by drainage. The adoption of aseptic and antiseptic measures has much curtailed its field of usefulness. There are still cases, however, where it is impossible to sterilize the peritoneal cavity,

and here it assumes its original role of importance.

The questions of when to drain and how to drain the abdominal cavity are presented more to provoke discussion than with any hope of final solution. They belong in the same category as the problem of when to operate in appendicitis, and like it must be settled in each individual case more by surgical intuition than by any rule of rote.

Before considering them it is necessary briefly to state a few pathologic facts.

1. The peritoneum can absorb large quantities of fluid, sometimes a weight equivalent to that of the animal in twenty-four hours.

2. Irritation or inflammation of the peritoneum lessens its absorptive powers.

3. The peritoneum can neutralize large numbers of pathogenic germs without the development of peritonitis.

4. The more rapid the absorption from the peritoneum the greater the toleration to bacteria.

5. Stagnation of fluid in the peritoneal cavity favors the development of peritonitis.

6. Leucocytes carry foreign particles from the peritoneal cavity to the lymph and blood vessels.

7. There is a current in the peritoneum which carries fluid and foreign particles towards the diaphragm.

Thus it will be seen that the peritoneal cavity, up to a certain point, drains itself. After that point is passed it ceases to drain at all. For the surgeon to drain some cases does harm, as it is needless; for the surgeon to drain other cases does good, as it is necessary.

Despite the labor devoted to modern surgical technique absolute asepsis is an unattained ideal, and an abdomen opened is an abdomen infected. All require drainage, and the question is simply to determine the dividing line between the cases that may safely be left to nature and those which require artificial aid. The decision is to be reached more by a consideration of the condition of the general peritoneum than the quantitative or qualitative character of the poison with which it is contaminated, for a large absorptive power can effectively deal with an infection which would prove rapidly fatal if the power to eliminate it were absent.

The objections to the employment of a drain are that it is a foreign body; prevents primary union; endangers secondary infection; sometimes causes fecal fistula;

* Paper Read at the Meeting of the Medical Society of Virginia, held at Newport News, Va., Sept. 22-23-24, 1902.

frequently gives pain, and always prolongs convalescence. Despite these undeniable facts the indications for the use of a drain are sometimes imperative, for the one great object of the surgeon is to save life and all else must be sacrificed to its attainment.

No surgeon would drain when hemostasis has been complete and the operation has been aseptic; few surgeons would drain for small bleeding or the contamination of a healthy peritoneum with the contents of a ruptured cyst or pus tube; most surgeons would drain for uncontrollable capillary oozing or the existence of acute local or general peritonitis.

Broadly stated, drainage should be used in the following cases:

1. When bleeding is uncontrollable, as after the enucleation of an intra-ligamentous cyst.
2. When profuse serous transudation is probable, as after the removal of a large adherent ovarian tumor.
3. When localized collections of pus are found, as in a case of appendicial abscess.
4. When acute general peritonitis exists, as in a case of perforating ulcer of typhoid.
5. When protective adhesions are desired, as in drainage of the gall-bladder.
6. When secondary infection is feared, as in some cases of intestinal lesions.

In fact, whenever in doubt as to the possibility of the collection of fluids in the abdominal cavity, or the development of sepsis from infection either before, during or after an operation.

Drainage of the abdominal cavity may be affected in three ways; by natural drainage, by indirect drainage and by direct drainage.

Natural drainage is dependent on the absorptive power of the peritoneum and the phagocytic action of the leucocytes, and should be maintained by offering as little surgical insult to the tissues as possible. Rough manipulation during the operation should be avoided, every step should be executed rapidly, and the aseptic technique should be simple and uncomplicated, or, in other words, "preserve the absorptive power of the peritoneum" as advised by Senn: "get in quick and out quick," as directed by Morris, and "avoid fuss, feathers and foolishness," as told by Price.

Indirect drainage is merely an artificial increase of natural drainage and it may be effected either by saline purgation, which was first introduced by Tait; or by postural drainage, which was first suggested by Clark.

Saline purgatives act by causing a rapid and profuse exosmosis of serum from the intestinal vessels and the consequent ab-

sorption of fluid and septic material from the abdominal cavity. They should be given in concentrated form and in large and repeated doses, and may often be made more effective by the use of enemata.

Postural drainage consists in the elevation of the foot of the bed some eighteen inches, thus by gravity carrying any free fluid in the abdomen to the under side of the diaphragm, where its absorption has been proven both theoretically and practically to be much more rapid than from other portions of the peritoneum.

Direct drainage is the abstraction of fluid from the cavity by tubes or gauze or wicks, which are introduced either through the primary wound or through secondary incision. Drainage by means of a tube was first introduced by Koeberle. The tube consists of a straight glass cylinder from four to six inches in length, and from one-third to one-half inch in diameter. It is open at both ends and has its lower third perforated with small openings, and its upper end surrounded by a small rim or collar. It is introduced through the abdominal incision, the lower end going to the bottom of Douglas-no-cul-de-sac and the upper end emerging at the inferior angle of the wound. In a strict sense it is not a drain, as it cannot empty itself but the fluid has to be removed either with a syringe or by the insertion of a strip of gauze in its lumen. At one time Koeberle's drain was used in a large number of cases, and in the day when hemostasis and asepsis were imperfect it undoubtedly saved many lives. At present it is employed only when pus colloid, or semi-solid material has to be removed.

Drainage by means of gauze strips was first introduced by Bordenheuer, and this method—with the modifications to be mentioned—has largely supplanted the use of the tube. Gauze not only effects drainage by capillary action, thus removing fluid from the abdominal cavity and lessening the danger of sepsis, but may also be employed to arrest hemorrhage by pressure in the form of a tampon; to isolate an infected region from the general peritoneal cavity by acting as a wall or barrier; and to promote the formation of adhesions in cases where they are essential to safety.

Mikulicz, Penrose and Fowler have each suggested special forms of gauze drains, and the writer wishes to present for the first time a fourth modification, which—while it contains no new principle—is at least a new combination of old ideas.

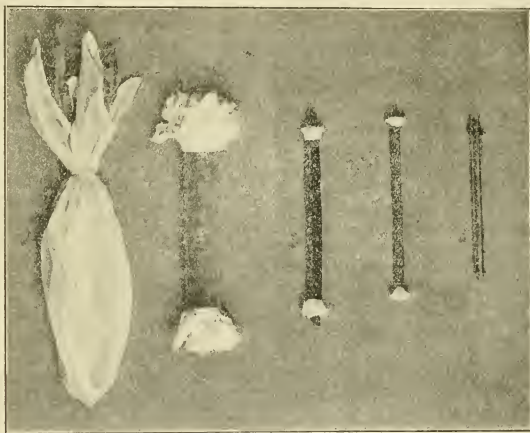
Mikulicz's drain consists of a square of gauze with a string fastened to its centre. If it is taken by the four corners it forms a pouch or bag with the string coming

through its mouth. This bag is introduced into the abdominal cavity and then packed with strips of gauze. It effects both drainage and hemostasis and is especially valuable where there is oozing from large raw surfaces. The advantages possessed over ordinary drainage strips are that there is no danger of a piece of gauze being left in the cavity, and the fact that its removal is facilitated by traction on the string, which inverts the pouch and frees it from adhesions.

Penrose drain consists of a number of strips of gauze passed through a decapitated condom, the ends of the strip projecting several inches beyond the rubber protective, and the absorptive surface being increased if necessary by cutting fenestræ in it. The object of this novel use of the condom is to

tion of the Penrose sheath and the Fowler wick, to which has been added a tubular drain. The rubber protective does not extend as far as the cordine, and the cordine does not extend as far as the gum tube. This leaves the end of the tube free to carry off fluid and the ends of the cordine exposed to absorb it. It is believed that the drain possesses the advantages of both the Koeberle glass tube and Bordenheuer gauze strips, and is free from many objections to each.

It is small in size, hence does not interfere with the closure of the wound. It is soft and flexible, hence does not endanger pressure necrosis and the formation of a fecal fistula. It is protected by impervious material, hence does not become adherent and is readily removed. The cordine gives



Mickulicz. Penrose. Author's. Fowler's. Koeberle.

prevent the gauze adhering to the abdominal wound or other portion of its track not requiring drainage. In many cases the drain acts effectively and its removal is easy and painless.

Fowler's drain consists of a number of parallel strands of "cordine" in a casing of Lister's protective silk. Cordine has a much greater capillary power than gauze, consequently the diameter of the drain is small. A Fowler drain the size of a lead pencil will rid the cavity of a large quantity of fluid and at the same time permit of the almost complete coaptation of the wound.

The author's drain consists of a soft gum tube surrounded by numerous strands of cordine, both inclosed in a thin rubber protective. It is nothing but a combina-

maximum capillary drainage for its bulk and can be removed in part or in whole without taking out the entire drain. The rubber tube acts as a sentinel to show if sudden hemorrhage occurs, it permits the escape of serum if it collects too rapidly for the cordine to carry it off, and it prevents accumulation of fluid which sometimes takes place after a capillary drain becomes choked with coagulated lymph. If the tube fails to act spontaneously it may be aspirated with a syringe.

The limit to the length of this paper does not permit of a description of how to place and how to care for these various abdominal drains, but in conclusion a few words must be written in regard to their number and location. Kelly in discussing the subject said, "We drain too often, but when

we do, we don't drain half enough." In a bad case reliance must not be placed in a supra-pubic drain. In an uphill fight there must not be an uphill drain. Capillarity must be reinforced by gravity. In acute general peritonitis the only hope of recovery lies in multiple drains through incisions at the most dependent part of the abdominal cavity, through the flanks in a man, and through the flanks and vagina in a woman.

Treatment of Typhoid Fever With Castor Oil.*

By C. C. Bass, M. D., Columbia, Miss.

It is proposed in this paper to call the attention of the Association to a treatment for typhoid fever which is at once old and new. The treatment is old in that castor oil has been administered for many years to relieve certain conditions as they arise in the course of the disease, it being often used to relieve tympanitis, constipation and accumulation of undigested and hurtful food. Perhaps there are few physicians present who have not used castor oil at some time in the treatment of typhoid fever. It is the equivalent of the established eliminative treatment, but it is a better choice of drugs. It is new in that castor oil has never been administered as an exclusive, or nearly exclusive treatment. The quite considerable inquiry which I have made has failed to find the treatment suggested in this light, except in an article of my own published in the Mississippi Medical Record, April, 1902.

This paper will present briefly: 1. the theory; 2, the method, and 3, the result of the treatment.

1. The Theory.—Typhoid fever is an acute, contagious, self-limited disease characterized by inflammation, necrosis and ulceration of Peyer's patches and the solitary glands of the small and large intestines. The cases are generally divided into three varieties; the abortive, the mild, and the severe forms. In the abortive form there is no necrosis and no ulceration of Peyer's patches. In this form the temperature reaches normal in the second week. This form seldom occurs in the section of the country where I practice. In the mild type, the temperature reaches normal in the third week, with slight elevations generally extending in the fourth week. In the severe form the temperature ranges high. It may reach normal in the fourth week, but may not do so for a number of weeks longer. In the second or third

week, the patient passes into a low adynamic condition characterized by dry tongue, sordes, delirium and muscular disturbances. It is also claimed that severe cases are those in which the absorption of toxins from the alimentary canal is extensive, and the elimination therefrom is defective. In the abortive cases there is seldom tympanitis, in the mild ones very little, in the severe ones this is a prominent symptom. The more tympanitis, the severer the case, and vice-versa. Meteorism arises from two principal causes; 1, increased fermentation which takes place in the intestinal contents, and 2, paralysis of the muscular coat resulting from toxemia. If the gases in the tympanitis are not themselves toxic, they, at least, increase the tension in the bowel and increase the absorption of the toxins and the germs that do exist in the canal. It is a firm conviction with me, that the serious nervous and muscular symptoms are, to a very great extent, if not altogether, due to the absorption from the intestinal canal of toxins. The results of the castor oil treatment prove this clearly enough and, it seems to me, does it conclusively. Take any case of uncomplicated typhoid fever where the temperature ranges above 103 deg. F. and give a dose of castor oil every twelve hours, giving no other medicine at all, and the fever will invariably be reduced in three days, and will generally be below 102 F., and always below 103 F. Any case with wild delirium will subside in the same length of time. The effect of the oil is confined to the bowel. It accomplishes what it does effect by eliminating from the bowel germs and toxins which would otherwise be absorbed. If sweeping germs and toxins out of the bowels, thereby preventing their absorption, diminishes these symptoms then, surely, the absorption of these poisons must be the thing that causes them or aggravates them. The administration of antiseptics, such as have no effect on the nervous system, will generally accomplish the same thing. This is again evidence that the cause of the severe symptoms, or the cause of their severity, is the taking up of something from the alimentary canal. Therefore the theory is deduced, that, the more of these gases, toxins and germs are eliminated from the bowel, the milder will be the case. The thing then, if this much of the theory is correct is a drug which will eliminate these poisons from the bowel and, at the same time, has no effect upon the general system and will not spend the patient's strength. Castor oil is the medicine wanted. It goes through the bowel practically as a bolus, or en masse, and cleanses them more thoroughly than any

* Read before the Mississippi Valley Medical Association, October 17, 1902.

other purgative, and it does not draw upon the system or any organ for its purgative property, but acts of itself, and is not absorbed to overload the already overburdened blood with abnormal substances. I feel myself justified amply in saying, after repeated and careful tests, that castor oil does not weaken or injure the patient, and that no other purgative known to me or used by me acts in the same way. In typhoid fever, digestion is very imperfect, and fermentation is excessive. We have in the alimentary canal, therefore, at all times, more or less fermenting and undigested food, which, of course makes a bad application to the inflamed, necrosed, or ulcerated mucous membrane. Move this off often enough to prevent any accumulation of it, and protect the membrane with oil, and the inflamed spots will not be likely to pass to necrosis and ulcers will heal rapidly. The quantity of this fermenting and undigested food will be kept less by moving it off often, and the amount absorbed will thereby be lessened, and the case thus held to as mild a course as possible. If the ulcers are slow to heal, and the case runs a long course, the patient is not overburdened with toxins to exhaust him before they do heal and the fever subsides. Abortive cases will be kept abortive, mild cases made milder, and severe cases will be converted into mild ones.

The Method.—Taking tympanitis as my guide, my object was to keep the bowels as free as may be of germs, toxins and fermentation. When I first began the use of the treatment, I gave one dose of castor oil every twenty-four hours. I found that, after giving a dose, tympanitis was partially or wholly relieved, but that is usually began to return before time for the next dose. I also found that the typical typhoid odor of the stool, while it was perhaps partially relieved, was never altogether. I then began to give a dose every twelve hours, and found that, in from one to three days these conditions were entirely removed, the stool was rid of the typhoid odor, and was as odorless as that of the healthy man. The presence or absence of the typical odor of the stool became at once another valuable guide in the treatment. These two results; 1, the bowels free from tympanitis, and 2, a stool free from odor, indicating a satisfactory condition of the canal, can be had by administering a dose of castor oil every twelve hours, but it cannot always be had by less than that.

A dose of castor oil is an indefinite quantity in the treatment of typhoid fever. It varies in different cases, and in different stages and conditions in the same case. It may vary from one to eight drams. Enough

to act in three to five hours should be given, but not so much as to act more than twice. If the patient is seen in the first week, when constipation usually exists, the dose will be from two to four drams, but if in the second or third week, when diarrhœa is the rule, one to two drams will be the proper dose. After one or two doses have been given, it can be easily regulated. During the second and into the third week, the dose is about the same, but increases considerably during the last week in the bed. In abortive cases the dose is usually larger all through the course of the disease. The taste is very well disguised by giving it in a warm cup with a little boiled sweet milk.

3. **Results.**—The result of the treatment is about as follows: The temperature ranges lower; tympanitis and delirium do not occur, and if they are present, they soon subside; diarrhœa and dysentery are prevented, or checked if they already exist; the disease runs a milder course, and the patient does not lose flesh and strength so fast as they generally do under any other treatment. The last named result is its greatest advantage over any antiseptic treatment. The explanation is, that any antiseptic that is effective enough to prevent, or materially retard fermentation and germ life, will also prevent or greatly retard digestion. Castor oil does not do this.

Up to the present time, I have treated thirty-two cases of typhoid fever with castor oil, and, except in a very few of these cases, in which I gave some other medicine to meet some special symptom, I gave nothing else. In order to be brief, I will report them collectively. Thirteen cases were treated with one dose every twenty-four hours, and nineteen cases with one dose every twelve hours.

Three of the thirteen cases which were treated with a dose every twenty-four hours, had a temperature above 103 F., delirium and tympanitis when the treatment was began. These symptoms subsided in from three to five days. The temperature came down below 102.2 F., in from two to five days, after that, they ran the same mild course that the other ten did. With the exception of one case for one day, and of the three cases in the beginning of the treatment, as just mentioned, the entire thirteen cases had a temperature during their entire course ranging below 102 $\frac{1}{2}$ F. Except as mentioned, of the three cases, delirium nor tympanitis never occurred. Their temperature reached normal in from fifteen to twenty-six days from the attack, and there did not occur a single complication. Of these thirteen cases, four had diarrhœa, and one had dysentery

when the treatment was begun. In each instance, these symptoms were entirely absent within four days. Afterwards, they continued as the other cases, having one or two actions after each dose of oil.

Of the nineteen cases treated with a dose every twelve hours there were six cases with delirium, tympanitis and a temperature above 103 F. when the treatment was begun. In all of them, these symptoms subsided within three days, the temperature coming below 102 F. There were three other cases in which tympanitis was prominent, in which, it also subsided. After the third day of the treatment, excepting only in fourteen instances, the temperature in the nineteen cases ranged below 102 F., throughout the entire course. It is to be understood that of the fourteen instances referred to, may be one, may be two, may three would occur in a single case. The temperature reached normal in from twelve to twenty-one days from the beginning of the attack. In calculating the duration of the disease, I have not taken the date of taking the bed as the first day of the illness, as is sometimes done, but, in each case, inquired carefully as to the first day of the malaise headache, etc., even when there was no knowledge of fever, and calculated from that date. One of the nineteen cases should have special mention, however. After a mild course, the temperature reached normal on the nineteenth day of illness, and on the twentieth day, began to rise again, and ran another course of twenty-three days, in which the temperature went above 102 F., several different times. Free hemorrhages occurred on the thirty-first day of illness, and tympanitis followed administration of opium and withdrawal of the oil. Tympanitis promptly subsided when the oil treatment was resumed. In this case the treatment seemed to fail, the duration of the disease and the hemorrhages considered. Six of these cases had diarrhœa when the treatment was begun, which invariably subsided in from one to three days. To sum up the nineteen cases, and leaving out the one specially mentioned, after the third day the temperature ranged below 102 F., tympanitis and delirium were absent and the temperature reached normal in from twelve to twenty-one days from the beginning of the attack, making them all abortive, or mild cases.

It is true this is too small a number of cases to base positive conclusions on, but it is large enough to commend the treatment to us as worthy of further investigation.

Fracture of the Skull.

Ry W. H. Wilder, M. D., Birmingham, Ala., Visiting Surgeon to St. Vincent's Hospital, Birmingham, Ala., Division Surgeon Frisco R. R. Co., and Professor Therapeutics, Birmingham Medical College.

Nature has wisely provided as the bony covering and protection of the brain a large oval shaped cavity, composed of an external and an internal table with spongy bone between them called diploë. These structures are so arranged as to be quite thick directly in front and behind, where blows are most apt to be received, and they are also reinforced at the base by ridges or curved lines running in various directions from the occipital condyles. The structure of it is such as to make it somewhat elastic, so that quite severe blows may be received without causing fractures. Indeed, it is scarcely possible to conceive of a better bony protection for that most complex organ the brain, than the skull.

For the purpose of study and convenience in classification its fractures are usually divided into those of the upper part or vault and those of the lower part or base; a fracture may also extend from the vault to the base.

Fractures of the vault are usually caused by direct violence, while those of the base are most frequently extensions of those of the vault and sides of the skull, or due to indirect violence, such as falls upon the feet or buttocks, the blow being delivered through the spinal column; blows received through the inferior maxilla are also frequently the cause of such fractures. The break in the skull is sometimes, though rarely, found at the point opposite that at which the blow is received; this has been demonstrated by throwing a skull violently against the floor on the occiput and producing a fracture of the frontal bone. We may also produce a "bursting fracture" or a "bending fracture" of the vault by compressing the two opposite poles of the skull in a vise: the former generally run toward the poles, while the latter are usually at right angles to that direction.

The size, shape and condition of the vulnerable body, as well as the force and direction of the blow, should be taken carefully into consideration in making a diagnosis of injuries to the head; unfortunately these cannot always be fully ascertained. It must not be forgotten that the inner table is sometimes fractured when there is no lesion of the outer; this condition, however, is rare. Of course the same varieties of fractures obtain in the skull as are found elsewhere, but on account of the proximity of the scalp to the bone the proportion of com-

pound to simple fractures is greater than those in any other part of the body. Those fractures of the base of the skull which extend into the nose or ear should properly be classed as compound. Fortunately nature seems to protect itself better against the invasion of septic germs in compound fractures of the skull than in similar fractures in other parts of the body.

Comminuted fractures are more important here than elsewhere, because it is in this variety we usually find depression and injury to the brain and its coverings; punctured and gunshot wounds are properly placed in this class. It is generally stated that the repair and restoration of fractures of the skull is due to the action of the pericranium; this is a mistake; while both it and the dura have a certain amount of osteogenetic function, in such cases, the principal part of this action is carried on by the diploë; consequently a callus extending above the external table is rare. That found on the internal or vitreous table by the dura is sometimes of such amounts as to form osteophytes large enough to disturb the motor areas of the brain; these excrescences gradually disappear. Sometimes they form about splinters or spiculae of bone from the internal table and produce considerable pressure on the brain. Where there is much loss of substance the gap in the skull is rarely filled in by the formation of new bone; as a rule there is a bony formation along the edges of the opening, but the greater part of it, if large, will be covered in by the formation of a strong, tough, fibrous tissue. When the loss of the skull amounts to as much as ten or twelve square centimetres we may not expect it to be replaced with bone. The regenerative powers of the cranial bones, however, are in certain cases quite marked.

There is little difficulty in making a diagnosis of a compound fracture of the skull, as the line of fracture can generally be seen and felt; small scratches on the bone, as well as its sutures, may at first sometimes be mistaken for fractures by the palpitating finger, and whenever there is any doubt the scalp wound should be enlarged and the injury closely inspected. On the other hand, small fissures are sometimes hard to diagnose by the sense of touch, here again an incision into the scalp will clear up all doubt. Localized tenderness along the line of fracture will frequently give an idea as to its extent. Where there is great comminution of the fragments pulsation of the brain may sometimes be detected especially if those fragments are quite loose or missing, and if the dura has been injured the escape of blood, cerebro spinal fluid or

brain tissue will sometimes give an idea of the amount of injury done to the brain.

Simple fractures of the skull are not always so easily diagnosed. The head should be very carefully inspected for depressions, knots, ridges and sharp edges of fragments. Palpation usually reveals more than inspection, especially where there is but little swelling and extravasated blood under the scalp. Sometimes a portion of the extravasated blood can be removed by massage, and thereby make palpation more accurate. Localized points of tenderness render great aid in determining operative procedures. This tenderness however does not usually appear to any great extent unless there is comminution or depression of the fragments, when the inner table will usually be fractured also. In such cases there is generally more or less depression and we always get more or less disturbance of the motor functions of the brain. These disturbance may also occur from blood clots, even when there is no bone lesion whatever. Some surgeons claim to be able to diagnose fractures of the inner table alone by percussion; this method seems to me to be impractical, and in my hands has been useless. In such cases I rely wholly upon the history of the injury and pressure symptoms, such as convulsion, paralysis, vomiting, stupor, etc.

It is usually quite difficult to determine with accuracy a fracture of the base of the skull. The escape of blood or serous fluid from the ear is frequently given as a classical symptom; this is seen only where the fracture passes through the petrous portion of the temporal bone. If the fracture extends into the orbit there will usually be more or less extravasated blood in the eye; should it extend into the nasal fossæ hemorrhage from the nose and mouth naturally follows. Paralysis of the optic, facial and auditory nerves indicate a fracture in to the anterior fossa with consequent injury to these nerves.

It will readily be understood that a blow on the head of such violence as to break the skull causes great concussion to the brain, whether there be produced any rent in its tissue or membranes or not; and I desire to call special attention to the fact that fractures of the skull *per se* amount to but little in comparison to the injury received by the brain and its coverings. Death has in many cases been caused by blows on the skull which have so injured the brain as to produce a fatal result without causing any discoverable lesion of the bone. For this reason intelligent treatment of such cases should be based more upon the injury done to the brain and its meninges than upon the fracture itself.

Trephining the skull is quite an ancient operation, which about the middle of the last century fell into disuse, but toward the close of that century and in the beginning of this one, I fear, the pendulum has swung too far in the opposite direction, and surgeons frequently do harm rather than good by operating where such a course is not indicated.

Before operating we should satisfy ourselves that we have a real injury to the brain, and not merely shock or concussion; the latter condition is usually indicated by only partial unconsciousness, equality of pupils, symmetrical muscular movements of the face and frequent vomiting. Concussion requires only rest in bed with elevated head, moderate stimulation, and later ice caps to the scalp. When there is profound stupor, inequality of the pupils, facial muscles drawn to one side with stertorous breathing and unilateral or bilateral paralysis, operation is indicated at once.

In fact, *whenever in doubt we should operate*, and as the operation proceeds we should carefully determine the probable injury done to the brain and its coverings. The entire head should be shaved, the scalp prepared antiseptically, incision made, and the skull examined carefully in every case where there is any doubt whatever as to the propriety of operating. Where there is found a simple fissure of the bone with no symptoms of compression the incision should be sewed up and dressed antiseptically. If there is a circumscribed fracture with doubt as to compression it is well to apply the trephine and go at least to the diploë and remove a button from the external table, when the condition of the internal table can be examined and further operation determined.

It should be borne in mind that both the scalp and the skull of the negro is thicker and tougher than that of the white man and consequently he can receive harder blows on the head without sustaining fractures.

All comminuted fractures of course demand immediate operation and elevation of the fragments; should such fragments not remain in position after being raised they should be removed. If the dura is lacerated and there is no hemorrhage from below it should be stitched up with cat gut; but if there is hemorrhage, the stoppage of which by sewing up the dura would cause pressure on the brain, it is best to pack the wound lightly with gauze. Every possible precaution should be taken to remove all fragments of bone, blood clots and foreign bodies that might cause pressure on the brain.

Stimson says: "Persistent depression

in the motor area may maintain a corresponding paralysis by its local pressure upon the cortex, but the weight of surgical opinion at the present time is opposed to the belief that it has any marked influence in producing irritation or other functional disturbances, such as epilepsy. It has been abundantly shown clinically and by experiment that the brain readily accommodates itself to a marked diminution of the cranial capacity, and that even a sudden diminution must amount to about two cubic inches in the adult skull before it can of itself produce permanent symptoms of general compression."

This seems to me to be very risky teaching, and I cannot urge too strongly the necessity of taking every possible precaution to prevent any pressure on the brain whatever.

Fractures at the base of the skull are best treated expectantly on the therapeutic plan.

During my term of three months as visiting surgeon to St. Vincent's Hospital of this city last spring, there came under my care the four following very interesting cases of fractures of the skull:

G. U. (col.) age 20, miner, was hit on right side of head by a brickbat thrown by another negro on Saturday night, April 19th, 1902. He was brought from Helena, in Shelby county, Ala., to St. Vincent's Hospital where I saw him on Monday morning, April 21st. There was no paralysis at all, but his mind was not clear; he was in a partial stupor, but could be aroused, and would answer intelligently, after which he would lapse into a stupor again; the pupils were unequally dilated. Upon examination of the wound under chloroform, it was found to be a depressed fracture of the front part of the right parietal, semicircular in shape over an area about half the size of the palm of the hand; just above and behind the ear, there was a hole about half an inch wide and an inch and one-half in length running upward and forward, on removing the spiculæ of bone from this hole small clots of blood, followed by cerebral tissue, came out. Loose spiculæ of bone were removed and the depressed portion of the parietal elevated and the scalp sewed up and drained.

The patient did well for five days and suddenly on Friday night, April 25th, had a convulsion, which was followed by others on Saturday afternoon; the wound was now examined by the hospital internes who stated they found no depression; nevertheless, the convulsions kept up in spite of large doses of bromides and chloral until he had had twenty-four in all, and died on Sunday afternoon, April 26th, on the 8th day; no post mortem was made.

Case 2. W. A., colored cook, age 28; on May 3rd, was hit with a hammer on the left side of the front of the head in an altercation. Patient was immediately taken to St. Vincent's Hospital where I saw him one hour later. He had lost a good deal of blood but was otherwise in good condition with no paralysis, no ocular symptoms and mind perfectly clear. He was anaesthetised, and upon examination there was found a circular depressed fracture of both tables of the skull just about the size of a silver dollar with no radiating fractures whatever. The part of the skull destroyed made a hole with edges almost as smooth as if cut with a trephine, and there was a depression of at least one-eighth of an inch. The pieces of bone were easily removed, and the dura was in perfect condition. The wound was sewed up, after removing all pieces of bone, and the patient made a complete and uneventful recovery, being dismissed in two weeks in as good condition as ever except as to the loss of a portion of the bony covering of the brain.

Case 3. A. W., white, age 35, was sent to the hospital from a neighboring town, where he had been found on the streets in a partial stupor; on his arrival he was only semi-conscious and could give no intelligent explanation of his injuries. His pulse was slow and full, and his temperature normal; there were several bruises about the face, and a large contused wound in the forehead; through this wound could be felt a fissure in the skull which was found to extend backward about three inches. The patient's stupor had continued to deepen since his admission during the night, but there was no paralysis. The trephine was applied and the dura found somewhat lacerated by fragments of bone from the vitreous table, but no visible injury to the brain could be detected and there was no hemorrhage. The patient rallied only partially after the operation, and died twelve hours afterwards.

At the post mortem the brain was found to be free from rents or tears, but there were several small hemorrhagic patches on the base caused by the concussion. The base of the skull also showed a small stellate fracture, but no displacements of fragments. The fracture of the skull itself in this case, though extensive, was a small factor in producing a fatal result; death being caused by the injury to the brain.

Case 4. J. A., white, miner, age 23, while coming up the slope of a coal mine was struck by a loose car running down the steep incline on June 25th, 1902, and brought fifteen miles to the hospital, where I saw him six hours after the injury. There was a large compressed compound fracture

of the skull on the front and upper part of the left parietal bone. The loose fragment of bone was slightly larger than a silver dollar. The patient was profoundly shocked, but there was no paralysis. I raised the scalp and removed the loose bone. The dura was badly lacerated, there was considerable hemorrhage from the blood vessels of the meninges, and a small amount of brain tissue came out with the blood. Besides these injuries there were simple fractures of the right hemeris and left clavicle. Of course an unfavorable prognosis in this case was given, but after three days stupor bordering on coma he began to rally slightly under urgent stimulation, and finally after a long time, with many complications, made a very remarkable recovery.

The Practical Application of Cystoscopy and Catheterization of the Ureters in Diseases of the Urinary Tract in Women.*

By Lindsay Peters, M. D., Columbia, S. C.

The perfection of the technique and instruments of cystoscopy and ureteral catheterization, together with the application of bacteriology in the study of pathological conditions of the urinary apparatus, has produced results almost unsurpassed in brilliancy in any other department of medicine. So rapid, indeed, has been the progress along this line that much of the newly-acquired knowledge has not yet been diffused throughout the profession at large. For example, how prevalent still is the old idea that alkaline urine is a *sine-quanon* of cystitis, while with the recent, accurate methods of investigation it has been shown that the reaction of the urine in cystitis is dependent upon the variety or varieties of bacteria producing the infection, the most common form of cystitis (that due to infection with the colon bacillus) giving an *acid* reaction to the urine.¹ Moreover, it is not uncommon to have an alkaline or neutral urine when the bladder is healthy, the seat of infection being the pelvis of the kidney or the ureter. Also, in former times before the introduction of more exact means of diagnosis, great dependence was placed upon the condition of the pus cells in the urine—whether discrete or in clumps—as a means of ascertaining the source from which the pus came, a test known to-day to be at best rough and unreliable. I cite

* Read before the Columbia, S. C., Medical Society, October 7, 1902.

¹ Brown—Bacteriology of Cystitis, Pyelitis and Pyelonephritis in Women, Johns Hopkins Hosp. Bull. Vol. XII.

the abandonment of these inaccurate ideas, which were so carefully impressed upon us in our college courses, as instances of the rapid progressive changes which have been brought about in recent years by the employment of cystoscopy, ureteral catheterization and bacteriology in the study of affections of the urinary tract.

In dealing with my subject I will draw freely from the publications of my former chief, Dr. Howard A. Kelly, of Baltimore, and will refer to some cases observed in his service at the Johns Hopkins Hospital and at his private sanatorium.

Let us consider the uses of cystoscopy and catheterization of the ureters in their application, 1st, to diagnosis; 2nd, to treatment, and 3rd, to protection of the ureters from injury in surgical operations in the pelvis.

Diagnosis. We are all aware how fallacious and misleading are the symptoms alone in affections of the urinary organs and how liable we are to error, even when aided by careful urinalysis. We know, for example, how often we ascribe to disease of one portion of the urinary passage the symptoms caused by a lesion of an altogether different portion or mistake the nature of the affection even when able to determine its location. We know, indeed, what a common error it is to confuse affections of the urinary organs (particularly of the kidney) with those of extraneous, neighboring organs. What a boon to medicine, then, is the perfection of the means of arriving at a more exact knowledge of these obscure conditions!

The cystoscope and ureteral catheter enable us to obtain precise information concerning not only the nature of the lesion, but also its location and extent in the lower urinary tract; and much definite knowledge of the condition of the ureters and kidneys may also be procured. I have repeatedly seen women supposed to be suffering with a severe cystitis who were found, on introducing the cystoscope, to have a normal bladder, but a greatly inflamed posterior urethra, with or without ulceration.

The diseases of the bladder which may be discovered by cystoscopic examination are so numerous and various as to forbid in this paper more than a mere enumeration of the most important. They include, (1) inflammations, ranging in intensity all the way from a simple hyperemia of the trigonum to extensive ulceration, which may involve the greater part of the bladder; (2) tuberculosis; (3) calculi and foreign bodies, such as hair-pins, portions of glass catheters, etc.; (4) fistulous openings, such as vesico-vaginal, entero-vesical or uretero-

vesical fistulae; (5) congenital malformations, as loculi, double ureter, etc.; (6) benign tumors, as polypi, papillomata, myomata, etc.; (7) malignant growths. I will cite briefly an illustrative case which was under my care in the private gynecological ward at the Johns Hopkins Hospital.

An old maiden lady, Miss S., had been suffering for many years with distressing vesical pain and tenesmus supposed to be due to cystitis. Not until the cystoscopic examination by Dr. Kelly was the true nature of the condition demonstrated, when a calculus the size of a pigeon's egg was seen. This was removed through a vesico-vaginal incision and the patient was promptly relieved.

Among the most brilliant achievements in diagnosis are those which demonstrate the presence of stricture of the ureter, obstruction of the ureter by a calculus or occlusion of the duct by pressure of a tumor, with the formation of hydrometer or pyoureter above the point of closure; and it is surprising how often these conditions, which were formerly overlooked, are found, with the means of detecting them at hand. In this way many obscure cases are cleared up and relieved by the application of appropriate treatment.

During my service at Bayview Asylum, Baltimore, in 1901, one of my associates in that institution asked me to see with him a patient living in the suburbs of the city, for whose history I am compelled to rely solely upon my memory, but which is essentially as follows: The patient was about 35 years old, parous, well nourished, but decidedly anemic. She had suffered for about three years with a "weak back" and had had, at long intervals, two or three attacks of moderately severe, cramp-like pain in the right flank, each lasting only a few days, not attended with nausea and not compelling her to remain in bed. The last attack of pain had begun three or four days before I saw her and was much more severe than the previous attacks, confining her to bed and being attended with chilly sensations and fever reaching 101.5 deg. The physician who was called regarded the case as one of malarial fever, associated with floating kidney; for the right kidney was felt enlarged, located low down in the flank and tender to pressure. After her first day in bed the temperature remained only slightly above 99 deg. F., which fact her physician attributed to the effects of quinine which he had given. During this time the urine was reduced in quantity, according to the patient's statement. The examination of the urine was negative; no pus nor blood was found even in the cen-

trifugalized sediment. Suspecting obstruction of the ureter in spite of the negative results of the urinary examination, we decided to catheterize the right ureter. On introducing the cystoscope the vesical mucosa appeared normal; a ureteral catheter was placed in the lower end of the right ureter, but after being pushed up a few centimeters it met an obstruction which baffled all efforts to force the catheter past, thus demonstrating an occlusion of the lumen in the lower portion of the ureter. The patient was then taken to the Maryland General Hospital, where she was operated upon by Dr. Winslow. A large pus-kidney with a much distended ureter was found and the kidney removed. The recovery was rapid and uncomplicated except for a small sinus which persisted for several months after the patient's discharge from the hospital.

In cases of hydrometer or pyometer in which the catheter can be pushed past the occluded portion of the duct there is a sudden, rapid and continuous flow of urine; when collected this may give an idea of the degree of distension of the ureter and pelvis of the kidney.² If the pus is thick it may be necessary to inject a small amount of sterile water to start the flow.

For the diagnosis of stone in the ureter or in the pelvis of the kidney the use of the renal catheter having its tip coated with wax is still the most satisfactory means. The highly polished surface of the wax, on coming in contact with the calculus, becomes marked with scratches which are plainly seen, with the aid of a hand lens, on withdrawing the catheter.³ When X-ray photography began to be so successfully employed by Dr. Leonard, of Philadelphia for detecting calculi in the ureter and kidney it bid fair to supercede the wax-tipped catheter in the diagnosis of urinary calculi; more thorough experience with that method, however, has proven it not to be infallible nor free from objections on account of errors due to obesity or the presence of phleboliths⁴ near the ureter and on account of the occasional troublesome burns resulting from the action of the rays. The use of the wax-tipped catheter precludes the liability to error from the presence of vein-stones and its cheapness, rapity and facility of execution, in the hands of an expert operator, commend themselves

to those who have seen both methods employed.

The wax-tipped catheter may be used also for retrograde catheterization of the ureter in the event of opening the kidney for removal of renal calculus and finding no stone in the kidney, as illustrated in the following case related by Dr. Kelly (loc. cit., case VIII). Introduction of the catheter into the left ureter was followed by an immediate and copious flow of turbid urine containing pus. When the catheter was withdrawn from 3 to 4 centimeters it was felt to be grasped and then to pass by some obstruction, imparting at the same time a grating sensation to the fingers; after this it was readily removed. The wax tip showed long, deep gouges extending the whole length of the catheter. Diagnosis, renal calculus with hydronephrosis. On operation no stone was found in the renal pelvis. A wax-tipped bougie was then passed *down* the ureter and met an obstruction 27 centimeters from the renal opening, past which it was gently pushed. Long, deep scratch-marks were seen on its surface. The fact that the obstruction was now near the vesical opening suggested that a calculus had slipped down the ureter to within a few centimeters of its external orifice. Vaginal examination showed a distinct nodule high up in the left fornix. An opening was then made in the vaginal wall, the ureter was incised over the enlargement, and a rough calculus extracted with a right-angled tenaculum.

Another important use of the renal catheter is the determination of the exact seat of pain in the side of uncertain origin by the induction of renal colic, or failure to do so, on injecting the kidney with sterile water. Dr. Kelly, in an article in the *American Journal of Obstetrics*, Vol. XL, No. 3, 1899, cites a number of cases in which, by that method, he has been able to locate the source of obscure pain in the kidney or to differentiate pain proceeding from the kidney from that of biliary colic, where the history and urinalysis left the diagnosis uncertain.

No means of determining the cause and source of pus or blood in the urine is so accurate and trustworthy, as the employment of the cystoscope and the ureteral catheter, which are also of value in learning the state of each of the kidneys separately, as, for example in cases showing tubercle bacilli in the urine, where it is of the utmost importance to know not only which side is affected and the extent of the disease, but also the condition of the organ on the opposite side.

Treatment. To deal fully with the possibilities in the application of cystoscopy

² Kelly—Operative Gynecology, Vol. I.

³ Kelly—Scratch marks on the Wax-Tipped Catheter as a Means of Determining the Presence of Stone in the Kidney and in the Ureter. *Am. Jour. Obst.* XLIV, No. 4. 1901.

⁴ Clark—Phleboliths of the Ovarian Veins simulating Ureteral Stones. *Am. Jour. Obst.*, XLV, No. 4, 1902.

and ureteral catheterization to the treatment of diseases of the urinary passages would produce a work of much greater scope than this is intended to be and it is my desire merely to call attention to the conditions in which those procedures have been used most frequently or with greatest success, citing a few cases to illustrate the methods.

It is possible, by means of the direct, open methods of cystoscopy, to expose the affected areas in cases of cystitis or urethritis (simple or tuberculous) and make applications of caustic, astringent or antiseptic solutions to these areas under the guidance of direct vision and there are many cases which are cured in this manner after having failed to respond to irrigations of various kinds or other forms of treatment; old ulcerations may be curetted and stimulated to healthy granulation. By this same method small calculi or foreign bodies may be removed from the bladder as well as polypi or papillomata, when not too large.

Calculi lodged near the lower end of the ureter may be extracted or allowed to pass after a sufficient dilatation of the ureteral orifice, as illustrated by the following case which occurred in the practice of Dr. Kelly.

The patient, a Jewish lady 38 years old, had been suffering for a week with frequent micturition, with hæmaturia at intervals, and pain in the region of the left kidney, extending downward along the course of the left ureter to its vesical orifice, where the distress seemed to be centered.

The abdominal examination was negative, but by the vaginal touch on the left side the ureter was found to be "exquisitely tender and there was a distinct, firm enlargement about half way between the internal ureteral orifice and the cervix uteri. At this point she located her greatest suffering and was unable to bear more than the slightest pressure."

On introducing the cystoscope into the bladder the left ureteral orifice appeared broad and pouting, surrounded by a deeply reddened, everted mucosa extending from four to six millimeters out from the orifice on all sides. This angry appearance of the uteral opening plainly indicated the affected side, but the orifice was not found to be distended as at first surmised from its appearance, but, on the contrary, contracted and strictured.

A ureteral sound was now introduced into the ureter and gently pushed to and fro in the effort to detect the click of a stone, but without success. A metal catheter, 2 mm. in diameter, was then introduced about 5 cm. into the ureter; as soon as the catheter was well past the vesical ex-

tremity of the ureter, urine began to flow until 8 cc. of clear, yellow, normal swelling urine escaped. This showed conclusively that the vesical end of the ureter was strictured and that the urine was pent up above the stricture, forming a hydro-ureter.

A ureteral dilator, 3 mm. in diameter, was then introduced well up into the ureter, stretching the orifice and thoroughly opening up the stricture. Having so far secured no certain sign of stone, a wax-tipped catheter was introduced and when withdrawn it showed a perfectly definite series of scratch-marks from top to bottom, which marking could have been caused in no way than by contact with a stone in the urinary tract. Further, on examining the urine drawn off by the catheter it was found that it had broken off a little buff-colored piece of stone 1 mm. in diameter, in addition to bringing away a number of other minute pieces.

Having dilated the ureteral orifice and demonstrated the presence of the stone, it was not deemed wise to interfere any further, so the patient was left in bed and given a small dose of morphia. Nineteen hours after the dilatation of the stricture an oblong stone, 10x3 mm., with tapering ends, was expelled, with immediate relief of all symptoms.

Dr. Kelly has also successfully treated pyelitis by repeated irrigations through the renal catheter. In one of his cases reported in volume I of his *Operative Gynecology* the infecting organism was the gonococcus.

Pain due to hydro- or pyo-ureter, resulting from a simple stricture in the lower end of the ureter, can often be relieved by dilatation of the stricture.

Protection of the Ureters during Pelvic Operations.

In 1889 K. Pawlik⁵ made a valuable contribution to the technique of the radical operation for cancer of the uterus when he described and advocated the introduction of bougies into the ureters before beginning the operation. By this means the ureters are pressed more closely against the pelvic walls, out of the field of operation, and are easily located by palpation, whereby the chance of injuring them is much diminished. Moreover, if by any chance a ligature should be thrown around the ureter its lumen would not be obliterated. Besides the operations for carcinoma involving risk of injury to the ureters, there are many cases of other abdominal tumors, to which the ureter may have become intimately adherent, in which operation would be rendered much safer and simpler by having the ureters made prominent by flexible bougies or catheters.

⁵ Intern. Klin. Rundschau, Wien, 1889.

Omnia Vincit Labor.

By J. A. Reagan, M. D., Weaverville, N. C.

In one sense, a man is what he makes himself. If he aspires to be a second or third class physician, or even a quack, he is satisfied when he reaches that height, for which he aspired. But if he desires and strives to be among the best and most successful and intelligent class, he is not satisfied until he stands in that rank. Individual labor does not stop when he reaches that height, although he may have had poverty and opposition to contend with in reaching that position; but his next step is to reach higher than the highest; hence he puts his brain and energy to work to solve problems that are beyond the present attainments—things that look unreasonable even to the scientific class. Individual labor has shown itself in other pursuits as well as in medicine. Lincoln, Johnson and others, struggled with poverty and ignorance, and rose to the highest position that is in the gift of the American people. Yet, while all honors were due them in reaching that height, no new discoveries were made. They seemed satisfied with the point reached, and made no effort to go any further.

Franklin struggled in a different way, and went beyond any of his day, by showing that electricity could be brought under the control of man; thus starting further investigations, until electricity is now made to furnish light, run machinery, carry messages to all civil nations on the earth. Pythagoras started the investigation of what we now call the solar system, Copernicus went a little further, and Newton completed the investigation by measuring the size of the planets, their distance from the sun and time of revolutions. When he was near the completion of his calculations and saw that they were correct he was so overcome that he had to get another to complete the work under his directions. Fulton on a small scale saw the power of steam, which has revolutionized commerce, travel and manufacturing.

We might refer to others, but will return to our profession. When we look back a few centuries and see what surgery, chemistry, and the practice of medicine was and look at it now in its rapid advance, it is as the light of the sun to that of the moon, and with equal astonishment to see the men who started the ball of light rolling which is removing the cloud which obscured the light that is now shining on medicine in all its branches. It has thus given to surgery its greatest triumphs—to the sufferer his greatest boon. Thrice blessed in giving his immunity to the victim of the surgeon's

knife, and causing pleasure to him, as well as to the surgeon who wields it, from the knowledge that he inflicts no pain. Thus in man's never-ceasing toil after knowledge has the Psalmist's vision been fulfilled. "Their line is gone out through all the earth, and their words to the end of the world." It requires then no deep research to be satisfied that the spirit of improvement is abroad, and is constantly and steadily working great and salutary changes in all the branches of science, and it would indeed be evincing great ignorance of the present state of medical science not to perceive that it has most deeply felt the influence of this spirit, and most extensively participated in these changes. Medicine has, in fact, assumed in the circle of science a high and independent station. It is no longer a routine of measures subject to visionary and ever fluctuating theories of imagination, but it is a profound philosophy whose principles can be determined and understood only by rigid induction and untiring investigation, and which can be put into successful practice only by measures of close observation, extensive information and a well disciplined and discriminating judgment. The science of medicine is indeed vast beyond conception, for it is more or less connected with most of the various ramifications of the natural sciences. Unroll the scroll of fame, look into the arena of nature's simplest, or her most gigantic laws, and we find whatever great achievements have been accomplished, what great discoveries have been effected by individual labor, by concentrated devotion to the knowledge that has been attained, and you will nearly always see a doctor closely connected with it. Accidents may sometimes have thrown the flash of her torch to guide the seeker along the intricate path he may be traveling, and may, in occasional glimmerings, have pointed to the hidden treasury, but it has generally been by regular study, and concentrated effort of scientific men that the true light has been beneficial to the world. But why need we wander from the paths of our science to seek for illustrious examples of the triumphs of individual minds over the intricate laws of the material universe. Turn to the pages of medical science and look at the long array of names that have in every case enriched it by their labors, and conferred incalculable benefits upon our race by their discoveries. Time would not permit me to even group together the constellation of intellects, which in all departments have shed light at every step to guide us onward in the acquirements of its precious truths. But we will only refer to one of the many who deserve the highest honors for their

noble work in the invention of chloroform, vaccine, microbes, etc., and refer to one upon whose wonderful discoveries are based the true and rational principles of all disease, and the influence of whose writings has illustrated every department that is deemed essential to the formation of a sound medical knowledge. As an example of individual labor we know of no one that exemplifies it better than Xavier Bichat, and while the name of Bacon shall be acknowledged as the great expounder of the only true principles to the acquisition of general science, that of Bichat will live with it in the medical science, resting on the same broad basis of inductive philosophy through all time. About a century ago Bichat published his renowned work on the membranes, and his memoir upon life and death. Before his time the study of morbid anatomy had only been presented at intervals, and in the most vague and unsatisfactory manner. Bonetus, it is true, at the close of the seventeenth century endeavored to collect in a systematic way the imperfect anatomical observations that had been made up to his time in regard to the cause and seat of diseases; but his work was filled with erroneous theories, for all that existed of morbid anatomy in his day were few isolated facts, almost lost in the voluminous works of theory and error to which they had been consigned. Bichat saw these deficiencies, and his vast mind, guided by physiology and inductive philosophy classified the tissues of the human organization according to their analogies, and having thus created general anatomy, he sought by every opportunity to elucidate their pathological state. Thus he may in truth be said to be the founder of the system which has since exercised so much influence upon the progress of medical science. We may now look for the influence which this system, conceived and perfected by individual labor, by the devotion and labors of one mind, exercised over some of the most important departments of medical science. If an important organ is suddenly and violently attacked by disease, how frequently does the whole system become deranged and seem to be under new and explicable laws. Healthy or physiological functions are replaced by those of pathological nature, and the texture which, when in health gave no symptoms of its existence, giving out the cry of suffering, and becomes the most prominent feature of the disease, and other symptoms which are caused merely by sympathy of tissues, becomes the most striking, and thus obscures from the physician the organ or part which is really suffering. There may be a severe and excruciating pain in the hip

joint. The question forces itself upon us, does it originate where the pain is, or is it from spinal irritation? The hearing is failing. Does it originate from hardened secretions, or is it from inflammation or obstruction of the eustachian tube? There is an unbearable pain in the ear. Is it from an abscess, or does it originate in cavities of a tooth or an abscess at the root of a tooth? Hence the great necessity of understanding the laws of reflex motor action, which have been learned by the discoveries, and arrangements of the tissues by Bichat.

The practice of medicine, in fact, and every rational theory of disease can only be derived from a thorough knowledge of the general anatomy of the tissues, and the deductions, which are drawn from this knowledge, of the cause of disease, we may draw prophylactic indications, but it will frequently mislead us if we only rely upon it to obtain the nature of the disease. But, guided by a knowledge of general anatomy and the established morbid condition, and sympathies to which the various tissues are subject, the pathologist no longer gropes about in the dark. No longer finds the practice of medicine a simple routine of measures subject to the various and ever fluctuating theories of the imagination, but a personal, rational philosophy, resting on the fixed and certain principles, which experience has deduced, and observation is daily confirming from the labors of scientific investigations. Nor are such labors less precious to the physician than to the surgeon. The pathology of medicine and surgery is the same, subject to the same laws, and in many cases requiring the same treatment. The age of surgical abasement is past. There is no branch of the profession that has made more rapid advancement than surgery. The pain and torture is gone; anesthetics has taken all away. The rough, and in many cases the filth and dirt that was seen is now washed away—pure water and antiseptics have taken the place, and the old adage is found true that "Cleanliness is next to Godliness." After seeing the rapid advancement of medicine and the numerous discoveries that have been made by individual labors, we might conclude that there was nothing to do but to come up to the present knowledge. So might those at the close of the eighteenth century have formed the same opinion, but when we turn to the nineteenth century we find in every department advances beyond anything that previous centuries had made. What will medicine, in all her branches be at the close of the twentieth century, on which we are just entering? It is impossible for us to know or conceive. It is our duty in the practice of medicine to make

thorough and patient examinations before beginning the treatment of cases, lest a serious blunder might occur. A distinguished surgeon who studied in the United States, Germany, France, and England, who was professor of surgery in more than one medical college, said to me, "Doctor, a surgeon is not the man who can perform a neat operation—any man who understands anatomy and has mechanical skill can do that, but the true surgeon is the man that *knows when to cut*." If we, without close examination and scientific knowledge, depend alone on therapeutic action of medicine, we may be in a sense falling to where the Quack stands, or be like the old doctor in the days when they compounded their own medicines. He had a bottle into which he put all surpluses when preparing his medicine, in powders. He was called to a case and after examining his patient he took a friend out and said, "I tell you candidly, I do not know what is the matter with this man." He studied a while and said, "I tell you, I have just thought what to do. I have a bottle with all kinds of medicine in it, I will give him some of that, perhaps there is something in it, I will give him some of that, perhaps there is something in it to meet his case." This is what might be called going it in the dark. No medical science found there. May the young men of the profession seek, study, and labor to go beyond anything now known. Individual labor, science and hard study alone can pass the present attainments, but there is much to be learned yet—the way is open.

"Diligence increaseth the fruit of toil,
A dilatory man wrestles with losses.
Hence it may be asked,
Ah, who can tell how hard it is to climb
The steep where fame's proud temple shines
afar."

The Method of Using Argyrol.*

By A. C. Barnes, M. D., Philadelphia.

In accepting your kind invitation to read a paper before you I am deeply conscious of the honor conferred upon me, because many of your members occupy positions equal in honor and eminence with the leaders in modern progressive medicine. The subject I have chosen was selected for two reasons; first, as a body of practical physicians interested in the extremely important question of the treatment of disease, my subject will probably be interesting; second, my paper will be of the nature of an open

letter in reply to many inquiries received from physicians in practically every state in the Union.

The original report of my colleague Dr. Herman Hille and myself, Medical Record May 24, 1901, concerning our discovery of a new silver salt was given considerable prominence in the medical press of America and Europe particularly because of its wide field of application in therapeutics. This salt now known as Argyrol is chemically silver vitellin, the principal features of which are, the high amount of silver contained, its easy solubility, its intense penetrative action and its freedom from the irritating properties possessed by the other silver salts. It is beyond the scope of this paper to deal with the chemical nature of the salt, and those interested therein are referred to our original report.

It is to the clinical applications of Argyrol that I would now direct your attention and more especially to the methods of using the product in inflammatory conditions of the eye, ear, nose, throat and genito-urinary organs. The methods herein mentioned are those employed in the various clinics in many hospitals including the University of Pennsylvania, City Hospitals of New York and Boston, Jefferson, Good Samaritan, Berlin Polyclinic, Children's Hospital, Philadelphia, and in some eye and ear infirmaries of several of our large cities, by surgeons whose names and reputations are well known to you, Martin, Thomson, Horwitz, Swinburne, Christian, Lewis, Lederman, Mellor, etc. Most of these surgeons are preparing or have already finished, clinical reports embodying their experiences with the salt which will be published shortly. My paper will be merely a short resume of the methods of using the product now in vogue.

Diseases of the Eye: Those oculists using Argyrol employ it in the conditions formerly treated by silver nitrate or protargol. The rationale of its use in these diseases is based upon its high proportion of silver, its deep penetrative action and its entire freedom from irritating properties—for instance: A 20 per cent. solution of Argyrol corresponds to about 10 per cent. solution of silver nitrate, yet this strength of Argyrol may be dropped in the normal eye without producing irritation or discomfort.

In purulent conjunctivitis a 25 per cent. solution has been found to be the proper strength for routine use. Well established cases of *ophthalmia neonatorum*, thus treated will be eradicated in 2 or 3 days. In the last 10 cases of this affection treated by Mellor at the University Hospital one day's use of 25 per cent. solution Argyrol,

* Read by invitation at the 14th Annual Meeting of the Tri-State (Alabama, Georgia, Tennessee) Medical Society, Birmingham, Ala., Oct. 9, 1902.

sufficed to rid the eyes of pus and effect uninterrupted recoveries. The Argyrol solution should be dropped in all parts of the conjunctival sac every 3 or 4 hours. With treatment instituted early in the disease corneal complications do not occur.

Gonorrheal ophthalmia is best treated by strengths of 25 to 50 per cent. solutions according to the stage and extent of the infection. In very severe cases a 50 per cent. solution instilled every 2 or 3 hours produces a reduction of the purulent secretion and affords comparative relief from pain.

An ordinary early case of this disease treated with free use of 25 per cent. solution every two or three hours will terminate within a few days. For the catarrhal condition of the conjunctiva resulting from gonorrheal ophthalmia many oculists direct the instillation of a 10 per cent. solution of Argyrol 3 or 4 times daily; this may be done, with perfect safety by the patient at home.

The effects of Argyrol is *trachoma* are still unsettled. Gilfillan, of New York, used it at the House of Refuge with indifferent results; Thomson mentions one very pronounced case in which the lids were so swollen that it resembled ptosis and in which he obtained great improvement by painting the affected lids with 20 per cent. Argyrol solution; this case had been treated with protargol without benefit.

For ordinary *catarrhal conjunctivitis* a 5 or 10 per cent. solution for use by the patient at home 3 times daily, with the local application of a few drops of a 25 per cent. solution by the attending physician, produces in most instances prompt and permanent benefit; this same method of treatment is employed in blepharitis, blepharo-conjunctivitis and blenorrhea. The most suitable strength for all around office use in treating corneal ulcers and the ordinary inflammatory conditions of the eye is 25 per cent.; this strength does not cause irritation or discomfort.

The methods of using Argyrol in diseases of the *nose, throat and ear* are perhaps best illustrated by quoting the experience of Dr. M. D. Lederman, of New York, who has been using it for four months in his private work and at his clinics at the Manhattan Eye and Ear Hospital and at the New York Polyclinic. Dr. Lederman states: "I have employed solutions from 10 to 50 per cent. in catarrhal manifestations of the nasal, pharyngeal and laryngeal mucous membrane; the applications were made with the usual cotton carrier every other day. The advantage this silver salt distinctly demonstrates in its freedom from irritation when applied to

sensitive mucous membranes. In acute and subacute *laryngitis*, I have used a 10 per cent. solution increasing to 30 per cent. without the least unpleasantness to the patient. After 2 or 3 treatments the congested appearance of the membrane gradually left and the voice returned in good volume; I particularly noticed that the harsh and dry sensation produced by silver nitrate was never experienced. The secretion was promptly stimulated by the Argyrol solutions and produced a comfortable feeling of moisture in the pharynx and larynx. In *post-nasal catarrh* the character of the discharge was influenced by the Argyrol solutions (20, 30 and 50 per cent.) The thick plugs of mucus so frequently expectorated in cases of *nasopharyngitis* and in *inflammations of the lymphoid tissues* in the pharyngeal vault, became more fluid in consistency—showing the stimulating effect of the drug upon the mucous glands—and thus permitted the re-establishment of the normal function of the membrane and relieved the annoying symptoms of hacking and dropping in the throat; the same effects were noted from applications to the nasal mucous membrane.

"The bland nature of the Argyrol solutions was especially observed in cases of so-called "Hay Fever." Ten to 20 per cent. Argyrol solutions while naturally exciting some sneezing, as would result from any foreign element, seemed to lessen the existing hyperæsthesia and retard the excessive flow of secretion; this blenostatic action I believe is due to the deep penetration of the Argyrol.

"The decided anti-germinal action of the salt is illustrated by its effects in cases of *chronic purulent otitis media* with osseous necrosis. In these cases I employ a 50 per cent. solution, freely in the middle ear cavity without any annoyance to the patient. The purulent character of the discharge is obviously modified after a few treatments and assumes a mucoid appearance."

In empyema of the antrum of Highmore, Hitschler, uses a 50 per cent. solution of Argyrol once daily and notes prompt disappearance of the purulent discharge.

Genito-Urinary Diseases: Dr. Orville Horwitz, Professor of Genito-Urinary Surgery, Jefferson Medical College, treats acute cases of Gonorrhea by ordering the hand injection of a 5 per cent. solution of Argyrol several times daily with whatever modifications and additions to treatment the cases may demand.

In acute Gonorrhea, Dr. H. M. Christian, Professor of Genito-Urinary diseases, Philadelphia Polyclinic, employs a 2 to 5 per cent. solution by injection (by urethral

hand syringe) 3 or 4 times daily; the solution is held in the urethra five minutes. If the entire urethra is involved, he employs daily irrigations of 1 to 1000 solution.

In *chronic posterior urethritis* he makes deep instillations of 5 or 10 per cent. solutions. Of his first 48 acute cases thus treated, 43 showed complete disappearance of gonococci from the discharge within 14 days; 38 of these patients were discharged cured in from 2 to 4 weeks.

In no instance did the injections produce irritation or discomfort.

Dr. G. K. Swinburne, Surgeon to the Good Samaritan Dispensary (the largest genito-urinary clinic in New York) has treated over 400 cases of Gonorrhea with Argyrol. His methods are as follows: In acute cases he irrigates the urethra daily with a 1 to 1000 or 1 to 2000 warm Argyrol solution and follows this by a 2 to 5% injection. If the patient cannot report daily, he orders the home use of a 2 per cent. injection. He uses Argyrol solution for irrigation where formerly he used potassium permanganate or protargol, because of better results and greater comfort to the patient.

In *posterior urethritis* and *cystitis* he makes deep instillations of a 5 or 10 per cent. solution. In chronic cases and in those requiring sounds he employs an ointment of 5 per cent. Argyrol in lanoline, the ointment being distributed along the urethra by the successive use of several sounds upon the end of each of which the ointment is placed.

In acute cases of Gonorrhea seen during the first or second day of the attack he injects a 20% solution and has succeeded in aborting the disease.

Briefly stated the advantages noted in the Argyrol treatment of urethritis are: the shorter duration of the disease, the power of the drug to allay the inflammation, the comparison comfort afforded the patient and the entire freedom of the injections from irritating properties.

Diseases of Women: In *specific urethritis* in the female Kevin injects a 10 per cent. solution into the urethra and bladder. In purulent conditions of the vaginal mucous membrane, the vagina is douched with 1 to 2000 or 1 to 1000 Argyrol solution, after which local applications of a 25 to 50 per cent. solution are made through a speculum; these same methods are employed in ulcerations and erosions of the cervix.

Cases of *cystitis* are irrigated with 1 to 1000 solution followed by the injection of a 5 or 10 per cent. solution into the bladder which is retained there for a few minutes and then discharged by urination.

In *obstetrics*, Argyrol is probably destined to play an important part because of its usefulness as a prophylactic against *ophthalmia neonatorum*. In several maternity hospitals the instillation of a 1 or 2 per cent. solution into the newly-born infant's eyes, is a routine practice.

Other clinical conditions in which the use of Argyrol has been suggested and is being tried are erysipelas (suggested by Dr. E. B. Gleason, Medico-Chirurgical Hospital as local applications 25 to 50 per cent. solution) and certain pathological conditions of the mouth and teeth (suggested by Dr. W. H. Snider of the University of Buffalo). It is too soon to make any positive statements of the methods or effects of using Argyrol in these two latter conditions.

It will be noted in reviewing my paper that Argyrol has been used in almost every branch of surgery, but it will be recalled also that silver has been for many years the principal drug in nearly all of these conditions. Silver nitrate is a very valuable remedy but its chemical nature necessarily endows it with certain drawbacks, viz.: it is irritating, caustic, is chemically changed by the secretions, and is not penetrating much beyond the surface. Argyrol is not chemically changed by the secretions, possesses intense penetrative power, whereby the effects of silver are exerted in the submucous structures (where they are most needed) and may be used in any structure of the body, in almost any strength without destroying tissue or producing irritation. Furthermore (as all the surgeons mentioned herein have noted and commented upon) Argyrol has one very marked property i. e. its effects in allaying the signs and symptoms of inflammation.

24 N. 40th St.

A New and Original Stitch and Method of Closing the Abdominal Walls and Other Deep Incisions.*

By Jacob Michaux, M. D., Richmond, Va.

Mr. President and Fellows:

There are several important desiderata that necessarily present themselves to the mind of the surgeon in closing his incisions. He desires prompt union and in order to obtain it if he is discreet he handles the parts gently. He seeks to approximate the edges throughout their whole extent with a pressure from his stitches that is not too great and yet is uniform along the whole course of their passage. He wishes, of course, to remove all chances of infection.

* Read before Medical Society of Virginia, at Newport News, Va., Sept. 24th, 1902.

These are the matters that must of necessity engage the attention of the operator. My endeavors to meet these indications resulted in devising the figure-of-eight stitch and an application of it which so far has succeeded very well.

My method is as follows: Take a suture with a needle on either side and pierce the peritoneum only on one side bringing the needle out just under the surface of the rectus muscle (supposing we are closing an incision in the median line) pass over the rectus and catch up the aponeurosis. Now lay down needle No. 1 and take up the other and repeat the operation on the opposite side. Now the peritoneum and aponeurosis are pierced on both sides. The next step is to cross over, taking up the aponeurosis *again*, (with the needle No. 1,) on the opposite side carrying the needle through the fat and skin at one thrust. Then needle No. 2 is taken across the incision; the aponeurosis pierced as well as the overlying fat and skin on that side. This completes the stitch.

It will now be seen that the aponeurosis is pierced twice on each side, thus ensuring a firm hold upon this important structure and that each thread as it crosses must draw the edges of aponeurosis together. This is desirable because upon the close union of its edges depends the exemption from hernia. The peritoneum is easily adjusted and the fat and skin give little difficulty in the adjustment of the edges of these incisions; but it is difficult to approximate the middle portions closely and especially the edges of the aponeurosis.

The obvious answer to this statement is, why not stitch them together as we have been doing heretofore? My reply is, that it is desirable to take out the whole suture when the incision is healed, that the risk of infection may be reduced to a minimum.

The ordinary stitch going through all the structures has been used by some, myself among the number, but the objection to it that it must be furthest apart (i. e., have the longest diameter) just where we want the closest approximation, namely in the middle. Therefore it follows that should sufficient force be applied to draw the central parts of the lips of the incision together the danger of necrosis of tissue is great. I have only used this stitch and this method of applying it in a single case—one of suspension of the uterus—thus far; but found upon examining the first one drawn to the proper tension all the requirements fully met and the after results so good that I believe it to be a useful measure.

I desire to call attention to the advisability of not including the muscle in the

stitch in central incisions. It causes constant twitching of the fibres which not only cause pain, but prevent prompt union.

The advantages claimed are these: 1. Uniform tension along the walls of incision. 2. Close approximation of edges of aponeurosis. 3. Complete removal of suture after healing. 4. Simplicity.

It is obvious that the general principles of this procedure may be applied to all deep incisions wherever located.

I desire now in conclusion, to state that nearly 2 months after I had devised this stitch, I found upon looking up the literature of the subject that Dr. Murphy, of Chicago, had introduced it some time ago—3 years—I think.

Drs. Charles M. Edwards and Warrick, of Richmond, Va., and Dr. Ardan, Virginia Hospital, Richmond, Va., assisted me in the operation in which this stitch was used.

I believe that my method of applying it is new.

Climatic and Electric Peculiarities of Colorado Favoring Recovery in Pulmonary and Other Diseases.*

By J. E. MacNeill, M. D., Denver, Colo.

Mr. President and Gentlemen of the Mississippi Valley Medical Association:

In considering the subject indicated by the title of this paper the assumption is a plausible one that the large majority of the membership of this Association have never familiarized themselves with Colorado, by personal observation or experience.

While much has been written on the subject and may be learned from research, the time and attention of a large majority of physicians at a distance is too closely occupied by the demands of their local practice to admit of careful study in this direction. It is therefore with the desire to add somewhat to their interest and possibly to their information, regarding the health giving and health restoring advantages of the Centennial State, that I appear before you and with no desire to make any comparisons or statements prejudicial to any other State or locality. Nor is it my purpose to treat the subject as much from a scientific or theoretical standpoint as to state well attested facts calling the attention of medical men and of all others who may be interested, to a State possessing so varied and abundant advantages for all classes and conditions of men, whether in the fullest enjoyment or seeking it.

* Address before the Mississippi Valley Medical Association at its 28th Annual Meeting, held in Kansas City, Mo., October 15, 16 and 17, 1902.

A residence of nearly two decades in Colorado, coming from about sea level—Chicago—where I had resided for a quarter of a century and had become broken in health and spirits, has year by year added to my convictions that in a large proportion of human ills, and especially such as have passed beyond the acute stage, far greater hope can be held out for complete recovery and far better results obtained than in the lower altitudes approximating sea level or in localities contiguous to large bodies of water resulting in increased humidity and often to unavoidable malarial and other health detracting influences.

Physical Characteristics of Colorado Affecting its Climate.

Colorado is Empire of itself. One of the six largest of the 45 States—with an area of nearly 104,000 square miles. It extends 380 miles east and west and 280 north and south. To the north lies Wyoming, to the south New Mexico, to the east Kansas and Nebraska and to the west Utah. It includes a territory equal in area to all the New England States plus Ohio or Illinois—or nearly equal to New York, Pennsylvania, New Jersey and Delaware—or equal to England, Ireland, Scotland and Wales. Of this area about $\frac{1}{3}$ to the eastward from Denver, Colorado Springs, Pueblo, Trinidad, Fort Collins and Greeley or about 40,000 square miles is an immense plain comparatively level and sparsely timbered while some 60,000 square miles to the westward is largely mountainous comprising many mountain ranges traversing the State in a general direction from north to south.

Included in this mountainous area are four great systems of natural Parks with an elevation varying from 7,000 to 9,000 feet above sea level. Commencing at the northern portion of the State, at 41 degs. north latitude, comes North Park with an area of 2,500 square miles or twice that of Rhode Island. It is 75 miles in length by 50 miles in width, with an altitude of 9,000 feet, while the mountains envyrioning it rise from 4,000 to 5,000 feet still higher. In no other portion of the globe is there a more perfect paradise for the hunter while the many streams winding their way through this great plateau are the abodes of myriads of fish.

Next to the southward and separated from North Park by a mountain range comes Middle Park, somewhat larger than North Park, containing about 3,000 square miles and quite similar thereto in many of its physical characteristics. Within its boundaries lies the famed Grand Lake, one of the most beautiful inland lakes on the con-

tinent and one of the largest in Colorado. In about its centre and covering an area about a mile square, it appears to be bottomless, the deepest soundings ever made failing to reach bottom.

But ten miles away are located the still more famous Hot Suldhur Springs, six in number, in which the waters boil up from the base of a cliff at a temperature of 117 degrees, and for drinking and bathing possess remarkable virtues in diseases of the liver, kidneys and skin as also in dyspepsia and rheumatism and allied complaints.

To the southward from Middle Park and separated therefrom by the great Snowy Range comes the beautiful South Park, some 50 miles in length by 20 to 30 miles in width, with an area of about 1,000 square miles. This lies about 75 miles S. W. from Denver and comprises the area in which was first discovered the rich gold mines that in the early days, some forty years ago, made Colorado famous. Here also are found mineral springs in various localities possessing waters of well known medicinal virtues. The average elevation of South Park is 9,000 feet.

Some 50 miles further to the southward and separated by several mountain ranges lies the largest of all these magnificent mountain amphitheatres, known as San Luis Park, with an area of some 10,000 square miles. It is elliptical in form and some 100 or more miles in length by 60 miles in width and comprises the famous agricultural region of Southern Colorado. It is bisected by the great river Rio Grande del Norte which flows through its entire length. It also contains a beautiful lake of the same name, miles in length and which has no known outlet although fed by some 18 or 20 streams.

Within its borders are 17 mountain peaks at very equal distances each from the other, the loftiest being Sierra Blanca standing alone in its magnificence and grandeur, crowned with perpetual snow and rearing its towering head 14,483 feet above sea level or 336 higher than Pikes Peak. The average elevation of San Luis Park is 7,500 feet and is surrounded by mountains rising from 4,000 to 7,000 ft. still higher than the plain which is remarkably level. Traversing this magnificent plateau of fabulous beauty and resources, nearly through its entire length passes one of the great arteries of Colorado's world famous scenic Railway system—the Denver and Rio Grande, which here presents one of its many remarkable features in railway construction, being a direct tangent 52 miles in length and without a cut or fill during its entire length, and this at an elevation of 7,500 feet above sea level.

The lands in all these great Parks are rich in nutritious grasses and wonderfully productive in grains, vegetables and fruits of all kinds wherever cultivated.

Those who imagine there are no lakes in Colorado will be surprised to learn that this mountainous area alone contains a thousand or more besides over 250 rivers and many smaller streams that are mostly fed by melting snows that are stored in the mountains thousands of feet above until such times as the moisture is needed below. Truly a wise provision of nature and one that adds vastly to the states productiveness and resources.

Within this area is also stored Colorado's vast and incalculable mineral riches inexhaustible in extent for many generations to come, secure in their nature encased vaults until such time as the enterprise and genius of man shall discover and utilize them—Gold, Silver, Iron, Lead, Copper Coal, Marble, Petroleum, etc., towards the discovery, exploration and recovery of which scarcely a beginning has yet been made. Centuries will be required to explore their boundaries and values and reveal to the world the incalculable riches of the Centennial State.

It can therefore be readily understood that in this wonderful variety of climatic conditions arising from the differing altitudes of the mountain and valley, its proximate and remote mountain streams, lakes and water courses, its innumerable resorts at various altitudes more or less protected at any and all seasons of the year from the heat of summer and the rigors of winter, its 300 days out of the 365 each year of sunshine and cloudless skies, its entire freedom from malarial influences; advantages and conditions prevail that cannot be improved upon in any other state or country, conducive to health or to recovery from diseased conditions.

The atmospheric conditions at all seasons of the year are such that by careful study of the requirements of the patient, localities may easily be reached that will afford the best possible opportunities for recovery.

Within this great mountainous area of nearly 300 miles north and south by 200 miles east and west, are nearly 150 snow capped mountain peaks ranging from 13,500 to nearly 14,500 feet in height, 72 of them being unnamed and 26 being higher than the famed Pikes Peak. Within this area are also many valleys of almost winterless temperatures. The same altitudes at different places afford climatic conditions differing entirely, owing to variations in the trend of the valleys in which they lie and to their exposure to winds and to the sun's rays. The ever constant and important

conditions of a sunshine, dry air and blue sky, common to all habitable portions of the State, form its basic health restoring and health sustaining qualities equally advantageous to the sick and to the well.

Mineral Springs of Colorado.

As the world's greatest storehouse of minerals of every description, this immense area of geological and chemical wonders would be strangely incomplete without mineral springs of every known variety and such it possesses in large and varied measure.

Diseases that often defy scientific treatment readily yield to nature's remedies epitomized in waters flowing fresh from God's unseen and fathomless fountains, possessing healing properties beyond the skill of man to duplicate.

Chemical analysis and scientific comparison show that within this great area of phenomenal riches and resources, the waters that are famed for their medicinal virtues found in any other portion of America or in Germany, Austria, France or Switzerland are all duplicated and that springs here exist that must eventually be known to the ends of the earth for their medicinal, health giving and healing properties, thus again adding to the renown of the Centennial State and making it a Mecca to which pilgrimages will be made by countless numbers for the benefit of waters that shall forever flow "for the healing of the nations."

Some Generally Accepted Facts Regarding Mountain Climates Applicable to Colorado.

After all the discussions that have been indulged in regarding the relative advantages of mountain climates as compared with altitudes approaching sea level, as health restorers in many diseased conditions and as health promoters where no serious abnormal conditions exist, certain accepted facts stand out prominently that must at once appeal most forcibly to all physicians as conditions of decided advantage in favor of high altitudes.

Elevations of 5,000 feet and more above sea level may be regarded as mountain climates. Common to all such elevations, varying with local conditions, may be mentioned,

- 1st. Pure Air, with relative freedom from noxious gasses and from irritating substances floating therein, as dust, etc.
- 2nd. Diminished atmospheric density.
- 3rd. Reduction in temperature.
- 4th. Diminished Humidity.
- 5th. Powerful insolation as to both heat and light.

It would hardly seem necessary at this

time to emphasize the fact so generally understood and accepted, as to the relative purity of the atmosphere in mountainous regions, usually sparsely inhabited, as compared with the atmosphere of lower altitudes pregnant with organic and inorganic forms of various substances that so abundantly thrive where the conditions are so favorable for their growth and existence in more humid atmospheres, in thickly settled localities with inefficient drainage and surroundings favorable to the generation of deleterious gasses, from decomposing substances, animal and vegetable and to malarial and miasmatic influences.

Atmospheric density diminishes as we rise above sea level in ratio varying from 12% at 2,500 feet to about 25% at 7,500 feet.

The diminution in temperature as we ascend above sea level amounts to about one degree for every 300 feet.

The diminished absolute humidity of the higher altitudes, especially noticeable in Colorado along the entire foot-hill region on the eastern slope of the Rocky Mountains is doubtless increased by the presence of a quickly absorbing and drying soil and the absence of frequent and prolonged rainfall. Also in the higher altitudes the sun's rays being more direct and powerful and of longer duration, forms a factor of great importance both to the invalid and also to those who are not to be included in this class.

Along this entire sun-kissed eastern Rocky Mountain slope of Colorado, extending for 400 miles north and south, the sun shines brightly about 62 hours out of every possible 100, while along the Atlantic coast it averages less than 50, while there the sun's rays are also lessened in force and directness and largely counteracted much of the time by clouds, fogs, mists and dense humidity which in Colorado are for the most part unknown quantities and conditions.

During the winter months the contrast is still greater. In Colorado we have from December to March 56% of all possible sunshine while along the Atlantic coast the average is but 37% thus showing a vast advantage in favor of the higher altitudes of Colorado.

Taking periods of 10 years in Denver as compared with the same in more eastern cities at about sea level, we have an average of 314 clear or partly clear days annually while in Chicago the average is but 251 days and in New York City 262 days. Such figures as these speak for themselves and need no further comment.

Of incalculable advantage also is the early morning sunlight throughout this entire eastern portion of Colorado as also very generally throughout the more mountainous

portions, with its warmth and brilliancy as cheering as it also is beneficial in the early part of the day, either to the invalid in hastening recovery or to those in health in sustaining and prolonging life. And it is to be noted that the purity of the air depends largely upon the amount and intensity of the sunlight passing through it.

Value of High Altitudes with their Rarefied Air and Direct Sunlight in the Treatment of Abnormal Conditions.

It would be difficult to name any disease or abnormal condition in the treatment of which a pure, aseptic, rarefied, clear, stimulating, sunny, dry atmosphere is not an inexorable requisite in accomplishing the best results. Medicinal remedies may or may not be demanded but pure air and pure water—nature's sovereign remedies—must not be forgotten or denied. Wherever these can be found is where the sick or the well best thrive and where the percentage of longevity will increase the most rapidly.

The researches and observations of climatologists of high standing in the profession and in the confidence of physicians the world over, and who have for years past made careful study of the relative advantages of high altitudes as compared with those approaching sea level, almost exception as regards Pulmonary diseases or tendencies in this direction, within the possible curative stages, give the preference to the higher altitudes.

Dr. Charles Dennison of Denver, and Dr. S. E. Solly of Colorado Springs, who have made careful observations during 25 years or more past as their large opportunities have afforded, together with many physicians of the State and elsewhere, less widely known, may be mentioned in this connection—as also Drs. C. T. Williams, Herman Webber and W. H. Walsh of London, Drs. Jaccoud and (the late Jourdanet of Paris, the late Dr. Carl Rudei, formerly of Denver, and later of Davos Platz, Switzerland. Dr. Archibald Smith of the Peruvian Andes and others of note, all men of eminence and large experience and observation in the treatment of Pulmonary diseases, are a unit in ascribing the best possible attainable results to the higher mountain altitudes.

Electric Conditions of Colorado.

While physicians of intelligence and wide experience in the practice of their profession in Colorado are convinced that in the realm of electric influence, a far more potent and beneficial factor exists in the higher altitudes favoring sustenance of the vital powers and recovery in many abnormal conditions, than exists in the altitudes

nearer sea level, yet they also recognize the fact that our present knowledge regarding this force existing subjectively in individual cases, is not sufficiently advanced to enable us to measure, fully describe or define it with accuracy, and the subject is here mentioned with the hope that the members of this Association may interest themselves in further investigation with the view to the possible removal of the cause, operation and effect of such important phenomena from the domain of present speculative theory.

A thorough and analytical discussion of the influence of the sun upon our earth and its living organisms would occupy a field too wide for the limits of the present paper.

The peculiar power of the solar rays in its creative and hygienic effects upon animal and vegetable life deserves a high place in scientific investigation. Throughout the entire solar system the sun diffuses heat, light and certain forces yet imperfectly understood and may perhaps be the dynamic generator of the electricity of the world. Heat, light and that other power, which for convenience we may call electricity, beget something like a chemical agency, the most powerful and subtle in its creative and metamorphic results within the realm of human observation and science.

The sun may well be regarded, from a purely scientific standpoint, as the source of life, since all material forms of life, both animal and vegetable, could not exist without it. Hence as the creator and preserver of life, no wonder the ancients worshipped the sun—the most natural and rational of all primitive theogony. True, there are certain classes of life, animal and vegetable, which seem to generate and thrive best in the environment of damp and darkness. Vegetable forms of fungoid nature for example and classes of insects of multitudinous and almost spontaneous breeding faculties, but short lived, come into being away from sunlight. And with such genera we may class the microbic and parasitic forms of life. But it is remarkable that the sun is the enemy and great destroyer of these lower forms of insectivora, fungi, sporadic and microscopic malfere.

While on the one hand the sun is the greatest germinating agency in nature, on the other hand it is the great universal antiseptic and germicidal agent in nature's economy.

It is familiar household knowledge that the best way to render wholesome such things as clothing, bedding, carpets, etc., is to hang or spread them out in the sun.

How can a poisonous swamp be best redeemed? By draining it and letting the sun consume the malarious and miasmatic elements.

Nothing is so cheap and quickly efficacious an agent in this regard as the solvent, deodorizing, disinfecting and vermin destroying influence of clear sunlight and air—especially *dry* air.

The sun is the great scavenger of the earth. From the earliest travel across the plains and mountains between the Missouri river and the Pacific coast, no fact of common observation was more striking than the rapidity with which carcasses of animals dying along the route were dried up and dissipated by the sun of the high and arid altitudes, with little or no putrefaction. Indeed Indians and Mexicans throughout this entire region, from time immemorial, have cured their fresh meats by cutting it into strips and hanging it up unsalted in the sun, like clothes on a line.

The most primitive people of whom we have knowledge in history or tradition were not only familiar with the healing virtues of sunlight, but for this reason as I have already mentioned, made the sun their chief god.

Osiris, the sun, was the god of the cultivated Egyptians and under various names was the chief deity of other leading Oriental races, as well as the god also of the Montezumas, their pyramid building prototypes of the American Occident.

And even the Hebrew poets of the Bible were so permeated with the ideas of the so-called "heathen"—derived from their former Egyptian masters, that they could not avoid incorporating those ideas into their sacred literature; as witness that beautiful passage of Oriental speech which figures their own God as the "Sun of Righteousness which arises with *healing in his wings*."

The Pathogenesis and Etiology of Epilepsy.*

By F. Savary Pearce, M. D., Professor of Mental and Nervous Diseases, in the Medico-Chirurgical College, and Neurologist to the Philadelphia and Howard Hospitals.

The subject of remote causes of epilepsy is a broad one and from the very nature of this enigmatic disease, often most difficult and frequently impossible to determine. But it is by seeking for the fundamental cause, difficult though it be, that we can expect at all to ameliorate the disease and indeed to hope even for prevention of its development in some measure down the generations. The subject must undoubtedly

* Read before the Section on Nervous and Mental Diseases, Symposium on Epilepsy, American Medical Association, Saratoga, N. Y. June 11, 1902.

ly be looked upon from what our scientific German friends would say the *euberschau*.

By epilepsy we mean, thus broadly speaking, a condition of irritability of the cerebral motor or sensory neurons or both in which there occurs at irregular times, cumulative effects or excess of irritability resulting in overflow to the end organs supplied by these centers. To the writer it seems that there must be a legion of pathogeneses and that epilepsy scientifically varies as do the stars of the astronomer, if such liberal comparison for the sake of illustration can be permitted. The inability of the human mind to interpret these earlier predisposing causes (pathogeneses) or even the more tangible truly exciting etiologic factors for the production of epilepsy, does not at all gainsay that the indeterminate factors do not exist. It shall be the endeavor in this contribution, therefore, to invite a reasonable speculation upon the difficult problem; and in the summation, well known facts will be rehearsed as well as theories, some of which may prove to be facts perhaps. As in the attempt to solve the origin of life itself, there will be found in epilepsy, we fear, ununderstandable phenomena. This leads to a permissible division of epilepsy into: first, benign epilepsy; secondly, malignant or incurable epilepsy at least, in the sufferer; although in this we hope to be scientific enough in speculation as to assume that much "malignancy" may be dissipated in the evolution of the progeny.

HEREDITY.

Just as the physiognomy or some trait of character is only too patent in heredity, so it must be that similarity of the finest structure of the body both anatomico-physiologically and chemico-physically is carried through from one generation to another. Depending upon environmental influences, too, will the nerve cell manifest irritability to a more or less degree in the progeny. So that it can be safely assumed that life being once established, the neuron never dies until the race extinction;—and that so-called atavism is nothing more than a reversion of types to the original protoplasm which has lost itself to our immature and inadequate conceptions. Heredity then *must* play an important part in the development of epilepsy and in many cases where we are not able from a limited horizon to fully appreciate. Some may contend this is not a practical application, but we can see no other scientific explanation for a minority of cases. Then again, other cases undoubtedly come through no fault of ancestry but by some micro-chemical agencies due to failure of metabolism in the developing embryo; and when the grosser

expression of *stigmata of degeneration* appear in the progeny, then we are all willing to admit congenital predisposition to the disease in question. Thus a mysterious pathogenesis will always exist as said before. We must not grow pessimistic but seek with the light at hand even a partial solution of the problem for the betterment of the race, and when at some happy day we may learn accurately what nerve force is, the control of these irregular actions of nerve force may better be set in motion through prophylaxis and remedial measures.

By the foregoing, we wish to uphold the hereditary nature, direct or indirect, of epilepsy in the vast majority of cases, a proportion of which may never be solved.

Following the etiology of epilepsy through the progenitor, we note a particular predisposition in the offspring of alcoholic parents; and it has been noted in particular families that before the parent became alcoholic, the children born were perfectly normal. After the alcoholic habit in the parent is established, the fate of the children not becoming epileptic may be death during infancy from inflamed meninges or convulsive seizures. The writer has a family under his care which typifies every phase of above description.

There can be no doubt that from 50 to 75% of cases are hereditary; the remainder occurring as the result of some accident in early life usually, or from reflex causes—such as eye-strain, irritated fifth nerve as in tic douloureux, phymosis, cicatrices and the legion of reflex causes not necessary to rehearse here. The uterine and ovarian causes need special reference, however; and it must be borne in mind that reflex causes will occasionally act in an opposite direction, i. e., for the lessening of attacks as in pregnancy occurring in the epileptic woman. The intervention of intercurrent disease such as typhoid fever frequently stays the attacks either by acting as an antitoxic agent or that the toxic state in such diseases is prone to be a depresso-motor rather than an excito-motor.

Dr. Strochmayer reports* some interesting statistics in heredity in neuro—and psychopathology. "18.6% were sufferers by heredity, 41.5% were healthy, 3% were debilitated children, 4% were suicides. Those who remained healthy up to time of death amounted to 30%. When heredity comes from both parents, the prognosis is graver. Arterio-sclerosis accompanying psychoses usually is inherited by the male members (alcoholism). Epilepsy is usually of homologous heredity."

* Munch. Med. Woch. XLVIII, 45, 46, 1901.

Thus dismissing heredity, we pass from the more intangible factors in the production of the malady in question to those more or less patent to us all.

METABOLIC POISONS.

The *aloxur* bodies, uric acid, leucomaines, ptomaines, etc., must all be toxic irritants exciting to the disease epilepsy in the predisposed or non-predisposed individual, depending upon the amount of toxicity and the resistance or idiosyncrasy of the patient. The lack of proper secretion of the ductless glands such as the thyroid may be causative of epileptic seizures, as for example, in the cretin.

The studies of Féry on the blood together with some observations made by the writer tend to confirm that there is a toxic agent in the blood and urine after attacks of epilepsy; also frequently found in the blood *before* the epileptic seizure. A case recently bled by the writer, a series of four convulsions epileptiform in nature showed extreme toxicity of the serum. The writer with Dr. Napoleon Boston, of Philadelphia, are making some studies at the present time; which we hope to be able to present to the profession before long. The interest of the matter of toxicity is only surmounted by the difficulties of the undertaking we have begun.

EXTRANEUS POISONS.

Such as products of the various infectious diseases, septicemia, toxemia, etc., poisoning by lead, alcohol, carbon dioxide and the innumerable various chemical and vegetable poisons may all excite the cerebral cortex to the production of epilepsy. It is needless to repeat here that the poison of syphilis or other infectious disease in the parent may leave its result upon the child (a parasymphilitic stage perhaps) in the form of irritable cortical neurons with resultant epilepsy. Alcoholic intoxication is another exciting cause. The writer has reported a remarkable case of this in which every time the man indulged to excess, he had a prolonged series of major attacks which continued sometime after the alcohol debauch and finally became quiescent only to be reawakened upon excessive spirituous indulgence.

TRAUMATISM.

This factor in the production of epilepsy varies all the way from commotio-cerebri of the neurons to organic lesion produced in the brain cells, and while concussion of the brain may be sufficient to establish the said irritability and the epileptic state, the grosser injuries such as fracture of the skull, meningitis of any type, gunshot wounds, brain tumors, hyperostosis cranii may all be

potent factors. Finally a more intangible something designated psychic trauma, result of fright, etc., may be undoubted cause of this disease. But in such instances we are willing to suspect predisposition, although from personal observation in clinical work, I have seen *idiopathic* epilepsy so-called develop from worry in a very conscientious person in whose ancestry there was absolutely no tendency to epilepsy or cause for suspicion of disease. This last type of case, a minimum proportion, constantly leads the investigator into new fields of theorizing and for imagination which must always be as long as we deal with the problems of life, if solutions are come at at all. We do not wish to be classed with those who assume that man may be able to control vital processes to the extent of prolonging life indefinitely, etc., by artificial means, but we are willing to admit part of the theory that some physical force perhaps not discoverable though already existent, is the cause for the continuance of life when once established.

The Lobe-Matthews' theory of nerve energy being electricity is not at all improbable since that force is universal. It is perfectly possible that in the disease epilepsy all the so-called causes we have endeavored to present act towards irregular regulation of the finest mechanism known, the human brain and nervous system, thus to permit the overflow of nerve force, electric energy, if you please, or other improper governing or inhibition of it though this fine mechanism, to produce the epileptic phenomena, whether psychic, special sense or general sensorio-motor, loss of control in the deviation from normal function.

Post-mortem pathology is not to be considered in this paper, since that seen at autopsy (even microscopic changes) is the result frequently of the epilepsy, not a cause. Of course brain tumors, meningitis, microcephallus, hydrocephallus, etc., are etiologic factors, but again do not come under the domain permitted in this contribution to the symposium.

CAUSATION OF ATTACKS IN IDIOPATHIC CASES SO-CALLED.

It would seem reasonable to suppose through theorization as recently amplified by Loeb and Matthews' whose very interesting article in the March number of the Century Magazine entitled "Nature of the Nerve Impulse," and tends to demonstrate, with good grounds, as shown through experiment and analogy, that chemical changes are really electrical phenomena through the action of certain salts as NaCl is largely electrolytic. Professor Matthews' conclusions are that "all chemical changes are due

to electric forces brought into existence between atoms which have gained or lost electrons."

The experiments of A. D. Waller upon "plant-electricity" recently reported in the *Revue Scientifique* also tend to uphold the universality of electric energy as the predominating mode of motion in the biologic world. Waller found that whenever a plant is wounded, a positive electric current is established between the wounded part and the intact parts.

There is a certain class of cases of epilepsy who for years have infrequent attacks, present no heredity as to the affection, nor physical stigmata; such people are often irritable and nervous after attacks, but mental failure does not seem to occur at all, while there seems to be absolute physical health at all other times. Such a case was that of Napoleon, and instanced in M. E., white, aged 16, who when first seen by us, had attacks at intervals of about nine days, but who had been in toxic condition result of bromides when first presented for treatment. A most thorough examination revealed nothing to account for her attacks. The general irritability has been allayed by hygienic measures and continued use of large doses of solanum, a dram t. d., and more.

It is not at all unlikely, that nerve energy is nothing more than electric energy and that the finest mechanism known to man, his brain and nervous system, is the agent of control of his bodily functions normal or abnormal. When the physical mechanism is disturbed by anatomical or pathologic alterations, there are discharge overflow currents through excitation or stimulation of motor centers. As before mentioned in a paper by the writer before the New York Academy Section on Medicine, last spring, at times the diagnosis of brain tumor seem to be entirely beyond the acutest diagnostician wherein at necropsy definite lesions in the nervous system are found but the symptomatology has been entirely different from what would be expected. Could not electricity transmission in unusual potential force through such lesions be the cause of epileptic phenomena through this thus uncontrolled force.

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Note Upon the Cerebro-Spinal Localizations.

By L. Harrison Mettler, A.M., M.D., 100 State St. Chicago, Professor of Physiology of the Nervous System in the College of Medicine of the State University of Illinois; Professor of Nervous and Mental Diseases in the Chicago Clinical School.

I presume there is nothing more axiomatic in science to-day than the statement that the fundamental, primary function of the nervous tissues is that of reflex action. In the protozoa there is no discoverable nervous apparatus but they as well as many plants exhibit a high degree of sensibility and act under stimulation in a way that is extremely suggestive of a neuro-muscular organ. In the medusæ or jelly-fish appears the first differentiation of tissue into what may be called a nervous system. In the Articulates this differentiation evolves itself into a highly complex organ, consisting, in a few words, of a series of ganglia passing along the dorsal surface of the animal and connected more or less intimately one with another by intervening processes. The most frontal ganglia arrange themselves into a ring which surrounds the anterior part of the alimentary canal and constitutes the œsophageal brain. In the vertebrates and especially the primates this simple arrangement of the nervous apparatus is rendered still more complicated by numerous changes brought about in the head and related parts of the animal by evolution. For example, the assumption of the erect position in the primates has caused a marked bend in the frontal part of the central nervous system; the demands for keener intelligence have caused the enormous development of the so-called pallium into the huge cerebral hemispheres; the old œsophageal brain with the alimentary canal passing through it has been replaced by the gray matter around and near the infundibulum and pituitary body, lying above and now completely severed from the new alimentary canal; and the sensory motor components of the cranial nerves have by mutual intermixture ceased to exhibit that simplicity of arrangement seen in the sensory motor offshoots of the cord below, while the nerves themselves, especially at their extremities, have shifted their positions in order to follow the remarkable changes in the head caused by the processes of biologic evolution. In spite of all this, however, the fundamental arrangement of the central nervous system, the cerebro-spinal organ, is one of remarkable uniformity and simplicity, while its chief and primary function everywhere, from cerebral cortex to peripheral nerve, is that of reflecting impulses

awakened by stimulation. Observation, both physiological and pathological, leads us to believe that impulses are not originated *de novo* in the nervous system and, that if all previous stimulation—past stimulation (heredity) and present stimulation (environment)—could be removed, the nervous system would be as still and functionless as an unruffled lake of water. No philosophic or practical comprehension of the nervous system, especially of the localization of its functions, can be obtained without a constant reference to this simple, axiomatic fact. Reflex action is primarily as much the function of the brain as it is of the spinal cord. The difference is only one of degree and not of kind. Inhibition the highest and most specialized of the nervous functions that seem to belong pre-eminently to the higher brain, is upon ultimate analysis the result of reflex action. If the brain inhibits and controls the spinal cord as for instance the control of the cellular structures of the anterior cornua by those of the central convolutions of the cortex, there are centers within the brain which inhibit and control other intra-cerebral centers, as for example the control of the motor speech center or the writing center by the visual. The mutual interdependence and interplay of these various inhibitory and other centers one upon another constitute the bases of all the higher phenomena of mentalization. These centers are stimulated primarily into action by inherited (hereditary) or acquired (environmental) impulses. The physical basis of the reflex phenomenon is the Neurone. The neurone doctrine has been criticised as being only a theory without much practical value. No greater error could be made. Rightly understood and employed, the neurone doctrine is of the highest practical value and furnishes us with a scheme for the making of correct diagnoses as nothing in the science of medicine heretofore proposed. The explanation for the differences in the symptomatology of cerebral, spinal and nerve palsies alone renders it invaluable as a working hypothesis. And suppose it were only a theory, it is more absolutely demonstrable than is the undulatory theory of light, the nebular hypothesis, the principle of gravitation or the atomistic theory, all of which are accepted by science as working hypotheses.

The neurone doctrine has revealed to us the cellular structure of the entire nervous system. There are no longer cells and fibres, only cell-bodies with their respective processes, which processes do not unite the cell bodies by continuity but only by contiguity. Each neurone constitutes a sort of connecting link by apposition only, a sort of reflex pathway between various similar and dissim-

ilar tissues. In the motor path for voluntary muscular movements, for instance, the upper or central neurone connects the cortex where its cell body lies imbedded with the cell bodies of the lower neurone found in the anterior horns of the cord. This upper motor neurone therefore serves as a pathway for efferent impulses between similar structures, namely, the nervous elements of the central cortex and anterior cornua of the cord. The lower peripheral neurone in this same motor tract connects on the other hand dissimilar tissues for its body is found imbedded in the anterior horns of the cord while its distal extremity is spread in the muscular plates of the voluntary muscular apparatus. The same conditions hold true with the peripheral and central neurones in the sensory or afferent paths. The special function and interdependence of these various groups of neurones must be known before one can fully appreciate the value of certain symptoms as localizing signs. Disease of the peripheral neurones whether of the afferent or efferent tracts will manifest a different set of symptoms from disease of the central neurones. As everybody knows, with paralysis due to disease in the peripheral neurones, as for example in anterior poliomyelitis, there is atrophy, loss of the reflexes and the reaction of degeneration; all because of the direct involvement of the muscular tissues with the particular set of neurones diseased. With central paralysis, on the other hand there is no loss but rather increase of the spinal reflexes, no atrophy and no reaction of degeneration. In the former the paralysis is of the placcid type, and is more or less monoplegic in character or involves certain individual muscles; whereas in the latter it is spastic in type and has reference more to particular movements in which specially related groups of muscles are involved. The same distinction is observable on the sensory side of the nervous system. The symptoms of locomotor ataxia, for example, differ from those of dementia paralytica largely in accordance with the functional difference that obtains between the peripheral and sensory neurones.

From the standpoint of this neuronic localization, it will not do to speak of brain, and spinal cord nerve diseases, for many of the processes of the neurones of the brain extend into the cord and vice versa. Hence the first great principle of localization in regard to the central nervous system must be based upon the knowledge of the functions of the various neurones. As degeneration, Wallerian or otherwise, is the chief pathological change in the essential, intraneural diseases, it follows that the degenerative or so-called "system" diseases of the nervous ap-

paratus are to be carefully diagnosed from the standpoint of cerebro-spinal localization. We have much yet to learn in regard to these neuronc localizations, but the knowledge which we have already acquired has cast a flood of light upon the symptomatology and nature of a large and important group of essential nervous diseases. As we learn more of the relationship of the various groups of neurones in the brain, cord and peripheral nerves, we will doubtless find an explanation for many of the obscure psychoses and neuroses in the former hallucinations and delusions and irrationalities of all kinds and degrees will be accounted for while in the latter general and limited paralyses, atrophies, parathesiae, alteration of reflexes, etc., will likewise be explained. Among the important cerebro-spinal localizations then I would place first this neurone localization; for upon this all the other points of cerebro-spinal localization will have ultimately to rest.

The second important set of localization symptoms which I would call attention to are those that are most commonly referred to when the term localization is employed. They are somewhat grosser, however, than the former and in reality depend upon the distinctions and their subdivision in various parts of the cerebro-spinal organ. Sensory areas and tracts are here distinguished from motor and in the sensory areas, those of special sense from those of general sense. This coarse form of cerebro-spinal localization is the one that has received the most attention because the distinctions are so obvious and therefore so practical from the surgeon's point of view. Here certain areas of the cerebral cortex, certain groups of cells or so-called nuclei at the base of the brain and up and down the spinal cord are employed as the means of determining the site of an irritative or destructive lesion. Their relationship to the various areas of the body, to certain movements and groups of muscles and to the viscera is carefully noted, and any lesion whether intra- or extra-neural which by focal damage involves the central nervous center representing the viscus, muscles, or part of the skin exhibiting the symptoms is determined so far as a localization diagnosis can be. The localization of focal lesions in the cord, for instance, is accomplished largely by the fact that certain horizontal levels of the body, both skin and muscles, are under the control of corresponding levels or vertebral segments of the cord. Symptoms referable to the pelvic organs will localize the lesion in the lumbar cord; a girdle pain will determine the level of the lesion in the cord, moving up or down with any alteration in the site of the lesion. Much has been learned of these spinal local-

izations and every modern text-book upon neurology has a table exhibiting the correspondences between various levels of the cord and the related areas of the body.

What has just been said of the cord localizations is true of the medulla oblongata and pons from which spring the principal cranial nerves. The components of these nerves reveal the fact that they are strictly analogous to spinal nerves and that their nuclei are the upward extension of the corresponding gray matter of the cord. As they are so closely bunched together, however, only the smallest kind of a lesion, and that a nuclear lesion as a rule, can be localized by a differential localization of the symptoms.

Above the cranial nerves, including of course, the olfactory and optic which strictly speaking are not nerves but cerebral tracts, we come to the cortex as the next great area of localizing centers. Here, as in the cord lower down, the sensory areas are posteriorly while the motor are anteriorly. It is not the province of this paper to deal with the cortical motor and sensory areas, as these are well known. Everybody knows that the occipital cortex for instance, presides over vision, the third left frontal convolution over motor speech, the areas about the fissure of Rolando over the movements of the body, etc. It should be remembered, however, that these cortical centers are merely the secondary, memory or interpretative centers; the primary centers being lower down. For example, the primary visual centers are in the pulvinar, anterior corpora quadrigemina and external geniculate bodies which are inhibited, and controlled by the visual cortical area, just as the primary centers of muscular activity in the anterior horns of the cord are inhibited and controlled by the motor cortical areas in the neighborhood of the fissure of Rolando. Sensation, pure and simple, travels up to the primary centers somewhere in the basal ganglia, probably in the optic thalamus; the interpretation and registration of the degree and character of these sensations are performed by the sensory cortical areas somewhere in and about the parietal convolutions. The actual movements of the lips, tongue, larynx, etc., in the production of language are brought about by the nuclei at the base of the brain; but these nuclei are under the control of the third left frontal convolution, which is again more or less under the control of the auditory cortical center in the temporo-sphenoidal lobe, etc., in all of which cortical centers are the memory registrations of the completed and combined movements necessary to produce the desired speech.

From some recent experiments of Sher-

rington and Grünbaum it would seem that in the anthropoid apes at least there are no cortical motor areas behind the fissure of Rolando, but that they are all located in the anterior central convolution just in front of the fissure. In man, this is yet to be established. Aside from this fact there is not much to be said in regard to the cartical localization areas that is not already said in any good book upon neurology.

In concluding this brief note upon a large theme then, I would urge, 1. That the nervous system is to be regarded as a single, complete, extensive organ, made up of contiguous neurones, and not to be regarded with the old arbitrary divisions into brain, spinal cord, nerves, etc.

2. That the primary function of these neurones is reflex action, or the transmission of impulses awakened by external stimuli in both similar and dissimilar tissues.

3. That there are two important and practical forms of cerebro-spinal localization, namely, the Neuronic and the Sensory motor.

4. That the neuronic is the more important and will prove to be so the more we learn of the functions of the various individual neurones and groups of neurones.

5. That the sensory-motor will probably long continue to be the most employed, especially for the purposes of surgical diagnosis.

Hæmophilia—Report of a Case With Hæmarthrosis.*

By J. E. Massey, Jr., M. D., Rock Hill, S. C.

Before discussing this rare and peculiar affection, I wish to present the history of a recent case and the only case of hæmophilia which I have ever recognized.

History.—L. M., white, male adult, age 28 years, is a native of Scotland, and has been a resident of the United States for fourteen years. He has a younger brother, fourteen years old, and a sister, sixteen years old, neither of whom seem to have ever shown hæmophilic symptoms.

His mother is robust and healthy. His father is living and has average health, but has symptoms of chronic nephritis, probably from alcoholic indulgence. Also the father has varicose veins on lower limbs, and a large varicose ulcer on his left leg, has recently healed, after continued treatment.

An uncle of the patient on the paternal side is described by the family as a "bleeder," having a fair, delicate skin. This

uncle was a native of Scotland, but later removed to Canada. Patient's father says that this uncle had, on the little finger of his left hand, for several years before his death, a large swelling, about the size of a goose egg, its skin covering being thin, and the subcutaneous veins being very plain beneath the thin skin.

Further history concerning this growth on finger is very indefinite, but they attribute his death to it, and perhaps it was a cancerous growth.

The patient, when coming to the United States, met with an accident on shidboard, causing a dislocation inward of his right patella, and since this time this knee-joint has been immovable, the patella still occupying its abnormal position.

His mother says that he has nearly bled to death on several occasions, from very slight wounds, or from an epistaxis, and probably that his first and most severe hemorrhage was when he was six years of age.

Also the patient says that he has frequently passed considerable blood from the kidneys.

In 1898 he had a tooth extracted, and the attending physician at same time cut an abscess of the gum beside the tooth, and the patient came near bleeding to death; bleeding for several days from the place where the incision was made in opening the abscess. Every hæmostatic resource was exhausted, including plugging the cavity, styptics, actual cautery, and suturing the edges, but the bleeding seemed only to stop after he had been almost exhausted. On several occasions during 1901, I attended the patient, not knowing his "bleeder" history, except what the family related concerning obstinate bleeding after a tooth extraction, and the idea of his being a hæmophile did not present itself.

In 1901 he had a large carbuncle on back of his neck, which, after being opened, bled rather freely, but not excessively, the oozing continuing rather long. I saw him on several occasions, when his left knee-joint, and right elbow and wrist were swollen, and tender to touch, and his temperature ranged from 100 deg. F. to 103 deg. F., and from the symptoms thought he had acute rheumatism, and gave him salicylates and oil of wintergreen, and other anti-rheumatic treatment. He would recover, after a rest in bed of ten days or two weeks.

In May, 1901, I saw him, when the only affected joint was the left knee, which was very tense and globular, and causing intense pain. No other joints being involved, I thought that perhaps he had a synovitis of the knee-joint due, perhaps, to

*Read before the South Carolina Medical Association at its 1902 Meeting in Spartanburg, S. C.

"melon-seed," or calcified bodies in the joint, or a papillary condition of the synovial membrane of this joint. I decided to aspirate the joint, and relieve his acute pain by lessening the intra-articular tension, at the same time ascertaining the nature of the fluid.

On aspirating, I was surprised when about four ounces or more of a black, sirupy fluid escaped, and the idea occurred even then that the intensity of the inflammation, combined perhaps with some trauma, rupturing a small vessel, had rendered the exudate hemorrhagic.

But, after questioning and obtaining a fuller history from his mother, the diagnosis was forced on me that this was a hæmarthrosis, and only another evidence of his being a bleeder. The opening made by aspiration was sealed hermetically and antiseptically, with sterile gauze and iodoform collodion, and healed very well, although for a radius of several inches around the puncture there was more than usual a bluish-yellow mottling of the skin. Since this time, on this joint, he has worn an elastic knee-cap, keeping up a continuous equable pressure. Since he has been wearing this knee-cap, he has had two similar attacks in this joint, but of a shorter duration.

The swelling of the elbow or wrist has always been of very short duration, but while it lasted, was painful, interfering with movement of the joints affected.

Since January 1, 1902, the patient has on several occasions expectorated blood, without effort of a cough. Having removed to a distance, he is not now under my observation.

Hæmophilia. Hæmatophilia, hæmorrhophilia, hæmarrhophilia, or hæmorrhaphilia, is an hereditary or constitutional fault, a hæmorrhagic diathesis, characterized by an unusual obstinacy of traumatic hæmorrhage, even from very slight wounds, a tendency to obstinate and even uncontrollable spontaneous bleeding, and sometimes by a swelling of one or more joints, a hæmarthrosis.

Etiology. The nature of this disease is unknown, and it is generally classed among diseases of the blood, but no constant changes in the blood or blood vessels have been shown.

Osler states that the blood of these patients does coagulate, but the coagulation time is much delayed. Also he says that it has been conclusively demonstrated to be an hereditary disease, and if in certain cases it is acquired, nothing is known concerning the conditions, which may cause it to appear in otherwise healthy families.

The duration of the hæmophilic tendency

in a family is remarkable. Gould and Pyle in "Anomalies and Curiosities of Medicine," 1900, cite the case of the Appleton-Swain family in Reading, Mass., in which there have been cases for nearly two centuries, and already it has appeared in the seventh generation.

The females of "bleeder" families are generally prolific, and the members of the family are said to look healthy, and have fine, soft skin. Social conditions of a family has no influence on the hæmophilic tendency.

Males are more often affected than females, the proportion being about twelve to one.

It is almost the rule for the affection to be transmuted through the female members of a family, and the daughters of a "bleeder," though healthy and free from the hæmorrhagic diathesis, are almost sure to transmit the affection to their male offspring.

Osler states that "the tendency to bleed usually appears during the first two years of life, and it is rare that manifestations are delayed until the tenth or twelfth year."

Gould and Pyle in "Anomalies and Curiosities of Medicine," state that Kolster has reported this affection in the daughter of a hæmophilic woman, and in an analysis of fifty genealogic trees of hæmophilic families, in fourteen cases, the transmission was direct from father to child, and in eleven cases, direct from mother to child; and therefore the law of transmission through the female line is not invariable.

Morbid Anatomy. No special constant changes have been found either in the blood or blood vessels, and it is not known whether it is due to a lack of elastic and muscular tissue in the walls of the blood vessels, or to some fault in the blood's composition, preventing the formation of a clot in the mouth of an injured vessel.

Some one has advanced the theory that the cause of hæmophilia is a heightened or hyper-functional activity of the blood-making organs, and that the hemorrhages into joints and elsewhere are only the eliminations of superfluous blood.

On post-mortem examination, recent hemorrhages, or traces of former hemorrhages in connective tissue, around joints, in the parenchyma of internal organs may be seen.

Symptoms. Hemorrhage from the umbilical cord is not usual in these patients, but hemorrhage often occurs during the first year of life, and usually is not noticed, until a small cut or trifling injury is followed by an obstinate or uncontrollable bleeding.

Osler divides the hemorrhagic symptoms

into *external* hemorrhages, either spontaneous or traumatic; *interstitial* bleeding, either petechiæ or ecchymoses; and *hæmarthrosis*, the joint symptoms.

External hemorrhages may be spontaneous, but usually result from some cut, scratch or bruise. Any minor operation on these patients may result fatally, and hemorrhage may be obstinate or fatal as a result of vaccination, extraction of a tooth, lancing of the gums, or a circumcision. The bleeding is a capillary oozing, and a patient may bleed for ten or twelve days from the socket of an extracted tooth.

Spontaneous hemorrhage from any mucous surface may be fatal. It has been noticed that pathological branches of surface, tuberculous cavities, typhoid ulcers, and ulcers formed by separation of sloughs, and not nearly so liable to bleed as are wounds and contusions. Also, when a female is a "bleeder," she seems to have no tendency to excessive bleeding at times of menstruation or parturition.

In Sajous' "Annual of the Universal Medical Sciences," 1890, two cases of spontaneous bleeding are reported from varicellous vesicles, which, in spite of energetic treatment, including the use of the actual cautery, proved fatal in one case, a male, three weeks old; the other case, a male, 2½ years old, finally recovering, after an extensive extravasation, caused a portion of the serotum to slough.

Professor D. H. Agnew reported a case of a "bleeder," who always bled obstinately from any cut or bruise above the neck, and never abnormally from any injury below the neck.

Interstitial hemorrhages, forming petechiæ or ecchymoses, may be spontaneous or traumatic. Small purpuric spots, or large blood extravasations, hæmatomata, may occur.

Mackenzie reports a case of "hæmophilic purpura of the retina," which ended fatally.

Cases of large hæmatomata in cellular tissue, intermuscular spaces, and even in the muscles themselves, causing extensive sloughing, are reported.

Concerning *hæmarthrosis*, Holt says: "The attacks of spontaneous hemorrhage are often periodical, accompanied by arthritic symptoms resembling rheumatism."

Osler states that "the attacks may come on suddenly, with fever, and closely resemble acute rheumatism," the larger joints being usually affected. The larger joints, especially the knee, may become swollen, hot and painful, with more or less fever, due to a hemorrhage into the joint, either spontaneous or as result of an injury. Recovery may be interrupted by frequent re-

lapses, and fresh attacks may occur at any time.

Sajous' "Annual of the Universal Medical Sciences," 1890, cites an instance of a case, where there was a sudden swelling and tenderness of the hip-joint, and the patient, a boy, was admitted to a hospital and treated as a case of coxalgia, and was discharged wearing a splint, but a surgeon, suspecting the true nature of the case, and tracing the family, found proof that the patient was from a family of "bleeders."

Statistics show that fifty per cent. of bleeders die before the age of eight years, and eighty-five per cent. before the age of twenty-one years.

In order of frequency, spontaneous hemorrhages may be from the nose, mouth, stomach, intestines, urethra, lungs, skin and umbilicus.

Diagnosis. Family history is of prime importance. One or more uncontrollable or obstinate hemorrhages, by a patient, do not justify the diagnosis of hæmophilia. But it is only when a patient shows a repeated tendency to very obstinate hemorrhages, either spontaneous or from slight cause on different occasions, especially if he shows the joint affections, hæmarthrosis, that he can be called a hæmophilic.

Aseptic aspiration of a swollen joint to determine the character of its contents, using a small trocar and bearing in mind that you may be making a breach of surface on a "bleeder," will aid in confirming the diagnosis.

Peliosis Rheumatica (Schonlein's Disease) comes on with a sore throat, and temperature ranging from 102 deg. F. to 103 deg. F., with an eruption, purpuric or urticarious, on the limbs, trunk or face, and with multiple arthritis. The latter resembling the swollen joints of hæmophilia.

In *purpura*, a symptom which may have various causes. The various forms of petechiæ and ecchymoses appearing on the skin, should be differentiated from hæmophilia, and assigned to their true cause, which may be, according to classification by Osler, various *infections*, as septicæmia, pyæmia, typhus fever, small pox, or measles, due to *toxic* causes, as the poison of venomous reptiles, or special idiosyncrasy to or overdosage of certain drugs, as belladonna, quinine, copaiba, the iodides, and others; or due to the *cachexia* of certain diseases, as cancer, tuberculosis, or Bright's disease; or due to a *nervous* causation, as in locomotor ataxia, myelitis, and other spinal cord affections, or a peculiar condition of hysteria, in which stigmata appear on the skin; or to a *mechanical* cause, as an ecchymosis, due to bursting of a blood

vessel in the violent spasms of whooping cough, or an epileptic seizure, or when there is a rheumatic arthritis, with an accompanying purpuric eruption.

Some of the hemorrhagic diseases of the new born may resemble hæmophilia.

In *hemorrhagic syphilis of the new born*, the child, soon after birth, may have extravasations of blood beneath the skin, and hemorrhage from mucous surfaces, or from the umbilicus, or interstitial hemorrhages. In such cases, autopsy would show lesions of syphilis.

Epidemic Hæmoglobinuria (Winckel's Disease), said to be sometimes epidemic in lying in hospitals, and thought for this reason, and also on account of its acute course and fatality, to be infectious, develops about the fourth day after birth, and is accompanied by a hæmatogenous jaundice, and the urine contains blood and blood coloring matter.

In *Infantile Scurvy* (Barlow's Disease) the child is rickety, and there are ecchymoses and extravasations of blood, and spontaneous hemorrhages; and, according to Osler, the essential lesion is a subperiosteal blood extravasation, causing thickening and tenderness in shafts of the bones, and there may be hemorrhage within the muscles.

Prognosis. Young patients have the least chance of recovery. As a patient grows older, the better does his chance of outliving it become. Though a case is cited of the first case of hæmophilia reported in this country, Oliver Appleton, dying at an advanced age, from hemorrhage from a bed sore and from the urethra.

Treatment. Osler says: "Members of a bleeder's family, especially the boys, should be guarded against injury, and operations of all sorts should be avoided." "The daughters should not marry, as it is through them that the tendency is propagated."

"American Text Book of Surgery" says: "Operations upon persons, the subjects of hæmophilia, are most dangerous, because, in spite of every possible human device to arrest the hemorrhage, it will often persist."

When the bleeding is obstinate, every means, medical and surgical, must be used to check it. Absolute rest, compression and elevation of the part, if possible, the use of styptics, and the actual cautery, and internally give ergot or ergotin, although ergot doesn't seem to have proved of much value here.

For obstinate epistaxis, plug the nose properly.

For bleeding from the socket of a tooth, carefully wipe out the socket, and locate the bleeding point, and plug from the bottom upward tightly, with a gauze tampon,

and the teeth of the other jaw will maintain the pressure, but for fixation, it may be necessary to put on a four-tailed or a Barton's bandage.

For hæmarthrosis, absolute rest and cold applications to check the hemorrhage; then, afterwards, warm applications to promote absorption, and then have the patient to begin to use the joint very carefully, and wear an elastic knee-cap or a Martin's rubber bandage. Give iron, arsenic and general tonics during convalescence. No treatment is known for permanent relief of the hæmorrhagic diathesis.

In case of obstinate bleeding in those patients, it has been advised to use perchloride of iron, in one half drachm doses, every two hours, after a purge with sulphate of soda. Also as a styptic a solution of fibrin ferment and calcium chloride has been recommended. Venesection and transfusion have been tried, but unsuccessfully. *Gelatin* has been warmly recommended, with the belief that it increases the coagulability of the blood, whether applied locally, taken internally injected subcutaneously or in travenously. The solution for injection must be sterile, and the dose is from one to three grams of gelatine. Internally, one to three-hundred grams may be given daily.

Continued History of Patient.

The patient whose history is given in the beginning of this article, has not during the past eight months been directly under my observation, until quite recently since Oct. 15, 1902. He removed with his father's family nearly a year ago to the neighboring town of Chester, S. C.

In May, 1902, I was called to Chester to see him in consultation with his physician there.

At this time he was in a very serious condition, having bled profusely for several days from the intestinal tract.

Finally, after about 5 or 6 weeks he recovered from this attack, but has been very pale and anæmic since then.

Further history is from the patient himself. He says that in July or August, 1902, his physician in Chester, diagnosed a collection of fluid in his right pleural cavity, and inserted a needle and by an aspirator removed about two quarts of a straw-colored fluid, and I think the doctor informed the parents, that he thought it due to a tubercular infection.

This family removed from Chester to Rock Hill in Oct., 1902, and the patient was again put in my care by his parents about Oct. 15. On examination, I found him very anæmic, and complaining of much shortness of breath on walking or any slight

exertion. His temperature varied from 101 deg. F. in the morning to 104 deg. F. in the evening, and pulse rate was 120 to 130 per minute. Also he had at in regular intervals chilly spells and sweats.

On physical examination I found a distinct bulging and limitation of rib excursion, with bulging of the intercostal spaces on the lower two-thirds of the right thoracic region, also marked dullness on percussion and total absence of all breath sounds. In fact, there were present all signs of a large collection of fluid in the right pleural cavity, which fluid was most probably *pus*.

Also there were signs of some consolidation in the lower lobe of the left lung.

On aspirating the right pleural cavity, the fluid was found to be *pus*.

Now, I was confronted by a case of *emphysema*, in a patient who was very weak and tubercular, and above all afflicted with *hæmophilia*, and I had repeatedly told this patient never to have, if possible, any surgical operation, either small or large.

I informed the patient and his family concerning his condition, and they were greatly alarmed at the presence of *pus* in the thorax, as they had confidently expected to see a straw-colored fluid as before. They wished to know if nothing could be done to remove the *pus*. I told them in case of an ordinary person, it would be advisable to make an opening and drain the cavity, but as he was a "bleeder," that such an operation, in my opinion would only hasten his death. Also I informed them that if the *pus* was not removed, that he could live only a short time, perhaps only two or three weeks.

I gave him a general tonic, and treatment for his symptoms—directed him to take a nourishing diet.

On the 30th of October, the patient and his parents told me that they had firmly decided that the *pus* must be let out, as he couldn't live much longer in his condition, and that if he died from *hæmophilia*, it would be a result, which could not be helped and for which no one could be blamed.

Therefore on Nov. 3, 1902, although fully believing that the result would be fatal, I made an incision about two inches long over the tenth intercostal space of the right-side, just anterior to the latissimus dorsi muscle. Keeping close to the superior margin of the 8th rib, and evacuated from the right pleural cavity over three quarts of *pus*. The cavity was then washed out with one gallon of normal salt solution. The hemorrhage was very slight. The two soft rubber drainage tubes were placed in position and the dressing applied. About 8

p. m. the dressing had become saturated with blood, and it was removed. The whole cut surface was found to be oozing blood, which showed even on standing no tendency whatever to clot, and seemed to be thinner and rather paler than blood of a normal individual. It was no use to try to catch up any vessels with hemostatic forceps for ligation, for no individual bleeding points could be seen, and it seemed to be a slow oozing from the tissues. The drainage tubes were removed and all efforts made to check the hemorrhage, and the wound was even partially sutured, which seemed to do no good, the oozing still continuing.

On Nov. 4th, about 10 a. m. after he had bled considerably, I packed the wound tightly with gauze and saturated the gauze with adrenalin chloride, which seemed to check the bleeding, although by this time I rather think that the bleeding was almost ready to stop spontaneously, simply from lack of blood in the circulation. At no time did any of the blood on the dressings on the wound show the least tendency toward clot formation, and I regret that I did not have the necessary appliances for making a blood examination and a differential count of the corpuscles.

At this time, the patient was given normal salt solution hypodermically and per rectum. Also he was given milk peptonized, beef-tea, gelatin and strong hot coffee, both by mouth and rectum, and this treatment was kept up during the night of Nov. 4th, and on Nov. 5th until he died at 4 p. m. on Nov. 5th.

Diagnostic Points of Difference Between Spermatorrhœa and Seminal Pollutions.*

By F. R. Sturgis, M. D., New York City.

Mr. President and Gentlemen of the Association:

When your excellent President invited me to read a paper before your Association, it struck me that one calling attention to the diagnostic points of difference between spermatorrhœa and seminal pollutions, would be of interest; first, because this is a class of diseases which has been comparatively little worked over, indeed, has been rather slighted by the medical profession; and, second, because I have noticed in reading over the literature of the subject which appears in medical journals that there seems to be a confusion in the minds of medical men as to the nature of these two diseases. With the majority of doc-

* Read at the twenty-eighth Annual Meeting of the Mississippi Valley Association, Kansas City, Mo.

tors the two diseases seem to be convertible forms and practically the same. This, in my opinion, is decidedly wrong, and in consequence of this confusion the treatment of this class of diseases is uncertain and happy-go-lucky, being rather empirical than based upon sound, scientific knowledge.

In this paper I shall not attempt to present a natural history of these two diseases except in so far as it may be necessary to elucidate the points which I wish to make, and these points I shall lay down as follows:

First, Spermatorrhœa is a disease *sui generis*.

Second, Spermatorrhœa has nothing in common with Pollutions.

Third, Spermatorrhœa does not usually lead to Impotence.

Fourth, Pollutions may or may not be associated with Spermatorrhœa.

Fifth, Pollutions are liable to lead to Impotence.

For the purposes of this paper I shall not, of course, under pollutions include the nocturnal variety, or, what is vulgarly termed, "wet dreams," but shall confine myself to a consideration of the diurnal forms of this type of the disease, where the losses are constant and where the results are much more serious than they are in the nocturnal variety.

1. *Spermatorrhœa is a disease sui generis and has nothing in common with pollutions.* In this class of sexual diseases the symptoms are so distinct that when its natural history is studied it will be noted that the seminal loss which occurs is *not* constant. It occurs occasionally and under certain conditions, and those conditions are chiefly of the class which requires some strong muscular or expulsive effort to produce the loss, thus, severe coughing, sneezing, straining—as at stool, or during the expulsive effort made in lifting heavy objects, where the abdominal muscles are tense while respiration is suspended,—are the usual conditions under which the seminal loss occurs, and it is associated, but not constantly so, with a sense of smarting and burning in the deep urethra. The patient is then aware that fluid is running along the course of his urethra, and this sensation is associated with a distinct feeling of depression, so marked that, as patients have expressed it to me, they feel as though they had been "let down." This depression is not only mental, but also physical, and may last anywhere from fifteen minutes to two or three hours before the patient entirely recovers his normal tone. At the end of this time the patient has entirely recovered from his attack, and feels practically as

well as ever having no sensation of mental depression or physical fatigue, nor any of the symptoms which would be grouped under the generic name of Neurasthenia. This is one of the commonest of the cases which produce spermatorrhœa; but it may also be caused at times by constipation, which induces the seminal loss, not as has been supposed because the hardened feces press upon the ejaculatory ducts or upon the vesiculæ seminales but because the fixation of the abdominal muscles, as well as the muscular effort necessary to expel the contents of the bowels, strip the seminal vesicles, much as a sponge is squeezed of the water which it may contain. But, oddly enough, the opposite condition may obtain and seminal losses may ensue with an attack of diarrhea, especially of that type known as "nervous diarrhea," but only where an irritation of the deeper portion of the canal is present.

Now let us turn to pollutions and see what occurs in this type of disease. *Here the seminal loss occurs without any effort whatever.* It is purely a passive condition, increased, of course, if violent expulsive efforts are made; but in the more advanced type of the disease this is frequently absent, and the loss is a steady continuous one, the seminal fluid leaking and dribbling from the patient without any effort upon his part; the sensation of the urethral smarting or burning may or may not be present; if it is present it is continuous and not occasional, and the patient's entire urethra feels sore and tender; there is a continuous irritation throughout the canal. At stool, during seminal pollutions, there is no special increase in the loss; indeed, sometimes it is absent, but at the end of the act of defecation a gush of fluid may ensue, varying from several drops to a teaspoonful, unattended with any pleasurable sensation and hardly recognizable by the patient, so far as subjective symptoms are concerned; indeed, this may also be noticed by the patient at the end of his stool, when he finds that his under-clothing is wet from the secretion which has escaped from his urethra.

Now let us mark the difference which occurs in the two diseases during micturition. In spermatorrhœa the seminal loss occurs toward the end of urination, when the last expulsive efforts are made to eject the few drops of urine that remain in the canal. In seminal pollutions, on the other hand, the expulsive power is found almost completely lost, and the patient is totally unable to expel the last few drops of urine, which leak away either accompanied with or followed by a seminal loss. Indeed, the difference between the tonic and atonic

symptoms in these two diseases is particularly well marked.

As regards the subjective symptoms in these two classes of disease, the patient afflicted with spermatorrhœa is not neurasthenic nor hypochondriac. He is, as a rule, cheerful, physically capable and mentally sound. It is true he is somewhat upset by the thought that he is losing his semen, but it does not depress him to the same degree as it does the unfortunate victim of seminal pollutions. He is interested in the daily affairs of life; he attends to his business matters with promptness and efficiency, and he is, taking it all the way round, still a man. The unfortunate pollutionist (I ask pardon for this word as also for "spermatorrhœie") is the opposite. He is depressed mentally and physically; he is unable to take any prolonged or sustained effort, whether the same be corporeal or mental; he is easily fatigued; he is constantly worrying about himself, regarding himself somewhat in the light of the Peri expelled from Paradise. For him truly, there seems to be no hope, certainly not in this world, and as for the future, he is exceedingly doubtful or indifferent. In other words, he is a wreck, certainly not a man; he has no will power and no force. In this regard the distinction between these two classes of patients is well marked.

1. *Spermatorrhœa does not usually lead to Impotence, while Pollutions are liable to.* In regard to sexual potency and the capacity for coitus there is an exceedingly great difference between the two diseases. The *spermatorrhœic* is capable of coitus. In the lighter forms of disease his copulative powers are practically unimpaired; possibly the ejaculation may take place a little more rapidly than normally, and this is due to the inflammatory condition of his urethra and to a lack of tenacity in the openings of the ejaculatory ducts. But taking everything into consideration he is without doubt a man, with verile sexual powers and enjoying the pleasure which coitus brings in probably as great a degree as formerly. In the more advanced types of the disease the patient's erections may, perhaps, not be so good. He may find that the *gaudium coitus* is not as keen as it was before; he is not as eager for the fray and he may also notice perhaps that his ejaculation is a trifle too rapid and the duration and amount of pleasure curtailed by the rapidity of the act; still he is capable of efficient coitus, and many a man suffering from this class of disease is a happy father. So far as the partner of his joys is interested, she probably notes very little, if any, difference between the past and the present, for few women, so far as this act is concerned, are

very observant. It becomes with them a duty to be performed, and it is seldom that there is much pleasure attached to it, and, of course, the shorter the copulative act in the male, the less the pleasure of the female, and the more perfunctory the act becomes on her part.

Now let us see what happens with the pollutionist. He unlucky wretch, cannot get erection, and if he does, it is such a feeble, trifling affair as to hardly be dignified by the name of erection, and what makes his disease peculiarly aggravating is that while he has a flabby turgescence of the penis, in lieu of the normal erection, he has also more or less of the *libido sexualis* *libido sine potestate*; he wants coitus and he cannot get it, for his *membrum verile* is of no use except for urinary purposes; and to cap the climax, the more the desire the greater the seminal loss. Thus the unfortunate is between the Devil and the deep sea; he cannot perform his duties as a man or as a husband, and yet he continually wishes to and he feels that the more he wishes it the less capable he is of performing the duty. With this condition, very naturally, and intense melancholy ensues. The patient oftentimes can hardly behave himself decently. He is irritable, has no appetite, he cannot sleep, in fact, he is a wreck; a curse to himself, a trial to his wife and a bore to his neighbors who find it difficult oftentimes to put up with his vagaries.

Now let us watch the result as these two diseases progress. The Spermatorrhœic usually recovers; especially so if the form of his disease be that of defecation and not of urination. The urinary type of the disease is usually more obstinate and takes longer to recover from. The patient's condition does not end in impotence, or very rarely so, although, of course, it is quite possible that this disease may be associated with seminal pollutions, but then he is suffering from another disease and not from his original one, when he goes through the various stages and presents the various symptoms which the pollutionist exhibits. Under these conditions he may become more or less impotent, but I am perfectly satisfied, from a fairly extensive acquaintance with and observation of this type of patient, that this does not as a rule occur; with the pollutionist it unfortunately does, he becomes not only sexually, but mentally and physically impotent. All around him is gloom, and he can see nothing before him but Impotence, writ large, and the verdict is "Thou art no longer man but eunuch." Is it a wonder then that he sometimes ends the tragedy or comedy of

life, as you may choose to call it, by his own hand?

These are the main points of diagnostic difference which exist between the two diseases, and I believe that you will agree with me that they are pretty clearly marked.

There are one or two points, perhaps not directly connected with the subject, but still germane to it upon which, before closing, I should like to make a few comments, and one is, that a man may suffer from Spermatorrhœa without being aware of it, but he never suffers from seminal pollutions without knowing it. Many a strong, healthy man, if continent will pass spermatozoa in his urine, and since I have begun to study these forms of disease more carefully I have been peculiarly struck with this fact. Occasionally patients tell me that they had periods where the head aches a little, and they have a feeling of depression for no earthly reason, or as they style it the "blues;" they do not feel quite up to the mark, a condition for which they can offer no explanation, and they are not quite as ready with their work, or as bright in their wits when this occurs, as usual and in getting them to send me a specimen of urine, when such a condition of affairs obtains, I have been surprised, more so in my earlier days than now, to find spermatozoa in the urine. Now the opposite obtains with the pollutionist. He is aware not only that he is not up to the mark, but that he is decidedly below par, and he stays there. He does not recover as the other man does, and he notices, moreover, that his verile powers are not good, that his erections are flabby, and that the slightest friction of genitals against his clothing, or the slightest sexual thought will produce a flabby erection with leaking of what he believes is semen, and nine times out of ten is a seminal loss.

The other point to which I wish to call your attention, is that the spermatorrhœic is subject to nocturnal emissions, as healthy men are, and if the disease be slight his emissions are like those of other men. He wakes up immediately after or during the emission, and on finding out what the matter is he gives it no other thought than a feeling of regret that it should be another instance of "Love's Labors lost." But the pollutionist does not have nocturnal emissions, in the correct sense of the term. True, he finds the evidences of a seminal loss upon his night clothing, in the shape of the stiffened linen, and other tell-tale marks, but it has not woke him up, or, if perchance he does wake, he finds he is having or has had his emission without any erection whatever, unless possibly there may be a flabby and feeble attempt at one; and in the morning he rises without any

erection to greet him. With him the penis is as quiet and dead as is the traditional Cæsar; whereas, the spermatorrhœic rises with all the evidences of virility upon him, and rejoices to think that he is yet a man.

I know that with the number of papers before you time will not allow a further discussion of this subject which is especially interesting to us all, and many points I have not touched upon but I trust that in the discussion which follows I may be able to supply many of the points which I have omitted and which, perhaps, would more properly come out in the discussion than they would in the text of the paper.

Before closing, however, permit me to express my acknowledgement of the honor you have done me in asking a paper from my pen, and at the same time to thank you for the courtesy with which you have listened to what I have had to say.

16 West 32nd Street.

Massage and Movements in Hemiplegia.

Graham (Edinburgh Medical Journal) says that the benefits that may result from massage or any other remedial measure in disturbances arising from morbid changes in the central nervous system, or in any part of the body, will depend more on the nature of these changes than on the merits of the treatment, however appropriately and skilfully it may be employed. When paralysis of central origin has come on suddenly, he prefers to abstain from the use of massage until the perturbation in general has subsided, and the patient has become somewhat accustomed to his unnatural condition. But, in the meantime, while thus waiting to spare the nerve centres any supposed extra commotion, the peripheral pathological changes are gaining ground, which later may only be imperfectly overcome. Such changes are, interference with the supply and the return of the circulation, owing to the accelerating influence of muscular contraction and relaxation being absent or diminished; and, as a result of this, variation of temperature, usually lowering, and passive hyperæmia or ischæmia; hypertrophy of interstitial connective tissue, with, in time, subsequent cicatricial retraction, giving rise to contractures and atrophy of the muscular fibres; formation of adipose tissue of fatty degeneration—in a word, vasomotor and trophic disturbances. These are all rational indications for the use of massage, either as a preventive of such changes, or as a palliative of them when they have taken place. But if the nerve centres are impaired beyond recovery, or secondary pathological changes have occurred, the prospect of benefit cannot be encouraged.

The writer's experience of massage in a number of cases of paralysis may be briefly stated by saying that, in the absence of severe pain, obstinate contracture, or chronic spasms, this agent has proved useful in improving the circulation, temperature, and comfort of the parts affected. When in paralysis of spinal or cerebral origin recovery follows under manipulation, it was previously supposed that the central disturbance had entirely passed away, and that the force of habit was the main factor in the continued external manifestations of inaction; but the recent experiences of Professor Zabłudowski, and others teach us that it is possible, by means of massage and gymnastics, to educate other parts of the brain to take the place of the injured ones, by arousing psycho-motor impulses in the formation of new associations and combinations; so that we need no longer regard paralysis of either central or peripheral origin from the hopeless view that we formerly did.

However that may be, when the causative conditions have ceased, paralyzed muscles will not at once resume their former natural condition. Massage, passive and resistive movements, restore them to a sense of existence, enable them to recognize the power they still possess, and educate to a higher degree; and, at the same time, such treatment affords the *only* means of judging of the capabilities of the patient, and of telling him how to use them. Sometimes the patient will make better motion without it. This seems to give a sense of support and consciousness of power. Interlocking the fingers of one hand with the other, so that the well arm can raise the paralyzed one, is a most excellent device, encourages the patient, and educates the unimpaired centres to supplement the deficiency of the injured ones. This should be repeated regularly—six to twelve times three times daily.

Massage, if used early in these cases, would diminish the evils of inactivity upon the circulation and nutrition, and keep the muscles in a state of readiness for voluntary contraction. It is when there is only partial impairment of motion that massage will be likely to lead to recovery; and, when improvement or recovery does follow, it will be difficult to determine whether the recent exciting cause of the trouble has passed away, or whether we have succeeded in training the other parts of the brain to do the work of the injured ones. In either event, we ought to give the patient the benefit of the doubt by a vigorous persistence and long continuance of the treatment by massage and gymnastics. The author

then records two cases illustrative of the benefits of massage.

The theory by which one part of the brain can take the place of another when diseased, has been formulated by Broadbent somewhat as follows: Movements are represented in the opposite hemisphere in proportion as they are unilateral, in both hemispheres in proportion as they are bilateral, in execution. Either hemisphere can excite the bilateral movements, but only the opposite can excite the unilateral ones. Movements rather than muscles are represented in the hemispheres, and are lost in disease. Lateral movements by muscles of both sides are represented in both hemispheres, but in a normal state they are chiefly effected by opposite hemispheres. When this is diseased, they are impaired until the hemisphere on the same side has acquired functional power over them, through mechanisms before existing but unused. We want more light on the manner and ways by which functional power may be acquired by means of mechanisms previously existing but unused in the brain. We know that a man can get along very well with one eye, one ear, or one testicle, and it would be rather remarkable if one side of such a vastly more important organ as the brain should not be capable of supplementing injury to the other, or doing the work of both.

Stricture of the Ureter.

Howard A. Kelly (Jour. Am. Medical Association, Aug. 16), recommends methods of treatment for this condition, the following: 1. Dilatation of the stricture by flexible or metal catheters in a graduated series, up to four or five millimetres in diameter; this is the ideal method. 2. Freeing the ureter from a bed of inflammatory tissue by dissecting it out; this is occasionally sufficient. 3. Resection of the ureter; this is rarely possible. 4. Extirpation of the entire affected side by a nephro-ureterectomy or a uretero-nephrectomy, or, as Kelly has done in one case, a nephro-uretero-cystectomy; this is the only reliable method in cases of tuberculosis, as well as of pyoureter and pyelonephrosis of long standing. 5. Amputation and implantation of the bladder; this is applicable when the stricture is low down, the opposite side diseased, and the diseased side still capable of doing work. 6. Complete division of the stricture; this plan may be of service when the stricture is unusually tight.

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"THE PRACTICE OF OSTEOPATHY IS NOT THE PRACTICE OF MEDICINE."

This is the decision of the courts of North Carolina, State versus McNight of Southern Pines.

This party was indicted several months ago for practicing medicine without license. The magistrates court decided that the laws of the State bearing upon the practice of medicine were not sufficient to prohibit him from practicing his system or means of cure, which consisted solely of Massage, Electro Massage, Electricity, Hythrotherapy, Dietitics, etc. The Superior Court confirmed this opinion and the Supreme Court also sustained it. We watched the proceedings of this case with interest and while we do not desire to criticise the decisions referred to, we must admit that they are very disappointing.

The writer has always believed that any individual styling himself "Doctor" and assuming all of the professional care and responsibilities of a sick person, should previously exhibit evidences of his fitness for such an important position. He should be familiar with every method known that will relieve a sick person. He should be a scholarly gentleman, carefully trained in the practical application of scientific medicine.

To know one system, even well, is not sufficient. He should possess a practical and theoretic knowledge of every means of eradicating disease.

This is the kind of medical education, and the kind of practical medicine the people in North Carolina want. While our laws up to this time have been complete and full enough, this case has demonstrated a necessity of a revision.

To criticise the defects in the prosecution of the McNight case will do no good here. They are prominent enough to demonstrate the necessity of a more complete means of enforcing the laws touching upon the practice of medicine in our State.

It is not necessary for this duty to be shouldered by a medical man, probably it would be better for the State Society to employ a competent lawyer to look after all of these irregularities. A man who we could refer to when answering the numerous letters of complaint, that nearly every day come to us,

THE NEGRO QUESTION.

The true condition in the south concerning the *Negro Question* is not generally understood by the northern people. The cause that keeps the white man ever on the alert, that frightens and terrorizes the white women and little girls, that has made farms vacant, and sent the former owners to the cities, is the periodic uncontrollable sexual madness of individuals born of a race whose biologic animal potentialities can no more be changed by education and environment than can their woolly hair be made straight by careful and constant combing.

The increase in the south of horrible assaults on white women, and even little girls, is certain to continue as the African sexualist is more and more allowed the liberty of his sway of ancestral impulse, and as long as moralists continue to remain purblind to the African's dominant physiologic instincts—instincts biologic in their origin and which are demonstrated by periods of sexual excitement that operate under laws understood by the physician and scientist.

These physiologic laws are immutable; they cannot be governed by moralists nor suppressed by ethical culture. The want of training along the lines of anthropology and physiology that exists among the class which believes that social recognition and ethical culture will change certain centers in the brain of the African as well as reduce his physiologic activity, is an humiliating evidence of their ignorance of anthropologic facts.

It is also lamentable that the *begueulerie* of most physicians prevents them from stating the anatomic and physiologic facts which cause these sexual crimes of the negro; while many other physicians remain true to the profession's continuous, shameful attitude of *laissez faire* in social and national affairs.

I shall not here enter into the physiologic and anthropologic questions governing the conditions which cause the African to assault defenceless white women and girls. This uncontrollable animal passion is smouldering in every African, and no woman in the south can tell when it will break out in all its license of fury—all its passion of bestiality. The attitude of complacent moralists, the preaching of far distant observers, and the advice of maiden moralists—whose nubile age is so uncertain in the chilling atmosphere of New England—would be amusing were it not for the serious conditions underlying the real facts.

The anatomic and physiologic conditions of the African must be understood, his place in the anthropologic scale realized, and his biologic basis accepted as being unchangeable by man, before we shall be able to

govern his natural uncontrollable sexual passions. When education and religious teachings change the biologic basis of his color it will also be able to change the physiologic reason for his annual outbreak of sexual madness.

Like all animal nature throughout the world, the African is especially sensitive to the changing seasons. The regular increase of crime against property in winter is only an indirect result, through the social and economic influences of temperature, but the increase of crimes of passions and indecent assaults during the months when the temperature commences to rise is the direct effect of this temperature. The crime of rape is most numerous in May and June, and least so in November and December. Ignore the inherent and peculiar sexual organization of the African and crimes against the trembling white women of the south will continue. Accept boldly, frankly and scientifically his ancestral traits, and control him accordingly, is the only rational, safe and moral treatment of the negro question.

VENEREAL DISEASE; SOME SUGGESTIONS.

One of the prime objects and an integral duty of the medical profession is to eradicate disease from the human family, that man may become perfect in type and constitutionality, of his entire physiology. One principle object or measure toward such a consumation is to eradicate from the catalogue of disease which infect the human being, those which universally attack the vitality and physical condition of the race.

The greatest and most widespread danger which threatens the human family, is that of venereal diseases, especially syphilis and gonorrhœa.

Great plagues and calamities encircle the globe or devastate nations; but this foul destroyer goes on insidiously in our midst, in every locality, without ceasing; injecting its poison into the vital economy of the human race, to be continued from generation to generation; a slaughter of the innocent.

Dr. S. D. Gross, in a paper before the American Medical Association in 1874, "Syphilis in its Relations to Public Health," says: "Certain it is that it is of gigantic proportions, that it exists in many of the best and noblest families of the land; that since the establishment of railroad travel it has penetrated every rural district, and that it is poisoning, and slowly but surely undermining the very foundations of life in every direction; sowing the seed of death among our people and gradually deteriorating the national health."

Again "when a pestilence, e. g., smallpox or cholera breaks out in a community and threatens its population, every man's fears are at once aroused and steps are taken to counteract its progress. * * * But here is a disease a thousand times worse than the deadliest epidemic, doing its work slowly, and as it were, in disguise and darkness, ruining entire families, and destroying many of our best men and women and laying the foundation of untold misery, wretchedness and woe, not infrequently extending through several generations."

How fully did the Naester of American Surgery realize the extent and depth of this great evil.

It is fully recognized that this disease has greatly increased during recent years. According to Sanger, in 1860 there were 6,000 prostitutes in New York City. In 1897, 30,000 and it is estimated that at present there are 50,000. Nearly half of these admit that they are or have been sufferers from syphilis. "Dr. Gould, Disease and Sin," in American Medicine, Aug. 1901.

What an appalling picture, with this foul vice stalking through our land of reputed happy homes of loved ones. Something must be done to cleanse the human family from this foul blot.

The Medical World is awake to the importance of this great problem. It is receiving the earnest study of all prominent syphilographers and the profession in general, and yet there is need that every member of the profession give this subject careful and constant attention and study.

The united and organized profession of our country will be able to do something in having proper or serviceable legislation enacted toward the suppression of some phases of the evil. The ministers of the religious bodies can not exert an influence in this matter from the pulpit; only as the pastor in his private conversation and influence with the individual members of his flock, can he lead them to see the wrong and dangers of such experience. Only by direct power in advising and educating personally as he comes in contact with individuals in pointing the way to chastity and life. In showing the curse of an immoral course with its "Sickness and Sin" impressing forcibly the safety at proper time in a pure marriage.

The subject is being earnestly worked out by conferences of medical men, with a view of making progress toward some method by which the evil may be reduced to a minimum of its effect. The New York County Medical Society, early in the year, discussed this subject, and in September last the "Second International Conference

on Syphilis and Venereal Diseases" was held in Brussels, a report by Dr. Vander Poel appeared in the New York Medical Journal for October 11th, 1902. A motion was made by Dr. Minod and was adopted as follows: The most important and the most efficacious means of combating the diffusion of venereal diseases consists in the diffusion, as much as possible, of ideas relative to the grave dangers and importance of such diseases. It is especially necessary to teach the male youth not only that chastity and continence are not harmful, but also that virtue is most to be recommended, from a medical point of view.

Let each medical practitioner enlighten himself, quickly and thoroughly on this subject, that he may be useful and prepared to exert his utmost influence and power toward checking the condition which leads to the continuance of this blighting disease. The general practitioner is the one to meet this requirement. He is the only one who is best able to stem the current, as by the nature of the case, it falls in his way first and constantly. The specialist gets these cases only, as a rule, second hand.

THE TREATMENT OF GALLSTONES.

"No chapter in medicine is more interesting than that which deals with the question of gallstones," says Prof. Osler, in the latest edition of his Practice of Medicine. Especially is it exceedingly important when we realize that in nearly 7 per cent. (Kerr, of Germany, says 10 per cent.) of the autopsies, there is found gall-stones, a rate of such conditions occurring in some ages as high as 25%.

Besides this frequency of occurrence of this condition in individuals it is so distributed that every physician has more or less frequently to deal with cases of this nature.

When it is recognized and known that many cases assume severe condition and cause colic of a definite type, it becomes a very important subject for the general practitioner, under whose care nearly all of these cases first come; that he may be prepared practically to treat the cases and the condition in a successful manner, that the individual may be relieved as thoroughly and rapidly as possible.

Many measures have been suggested for the relief of the patient and for the permanent cure of the case.

The physician is not asked to see a case, as a rule, until there is a sharp attack of colic. When thus called the proper thing to do is to promptly relieve the patient of the pain which the rough, sharp, irregular concretions cause, by their presence in the liver, gall-bladder or in the duct in their

passage toward the bowel. A carefully prepared full dose of morphia sulph. and atropia administered hyperdermatically and aided at the beginning by a few whiffs of chloroform will be the course to be pursued. This use of chloroform serves a double purpose; by aiding the morphia to obtund the pain we get relaxation of the muscular fibres and thus enable the gall-stones to pass out into the bowel. At the same time a hot moist compress applied over the region of the gall-bladder will have an agreeable effect. Under such a routine course you will have the patient resting comfortable, perhaps sleeping calmly.

The means for diagnosing or detecting cases of gall-stones in the incipency of the attack is a problem that calls for the most active interest as such an acquisition would, by the rational consideration of the disease, be the most fortuitous, both for the physician and the patient that could occur.

Dr. Deavor, of Philadelphia, in a paper read before the Rochester Academy of Medicine on Oct. 7th, 1902, (N. Y. Med. Jour. Oct. 25th) says: "It is therefore, the duty of the surgeon to show the medical man that jaundice and the passage of calculi are not necessary to form a diagnosis of gall-stone disease."

Whether this is possible remains to be seen, yet the future may develop such intelligence and opportunity.

Dr. Osler says: "In a majority of the cases gall-stones cause no symptoms, the gall-bladder will tolerate a large number for an indefinite time."

When it is known that a very small percentage die from the direct effect of gall-stones, and many autopsies show the existence of calculi where their presence was not known to exist would indicate the indefinite prospects of being able to at any time diagnose the cases before the symptoms of colic from the presence of calculi at some point causing inconvenience.

For the present the profession must be content to deal with the condition when it definitely presents itself; but with however, a determination to discover the earliest indications of the coming storm. There undoubtedly are some definite indications which if understood could be recognized as the warning of the beginning of gall-stones disease since a pathological condition naturally affect in some way, however mildly, the normal physiology of the individual. Here is an opportunity for the clinician and pathologist to work together for the solution of this problem.

For the radical relief or cure of gall-stones various forms of treatment have been suggested and earnestly pushed by their originators and others but most of them

found wanting by members of the profession.

Olive Oil and the Durand treatment by ether and turpentine have proven unsatisfactory.

Surgical treatment undoubtedly is the rational course for the rational cure for the disease.

Surgical interference should at least be secured when the colic attacks continue to repeat or when they become so severe that they threaten the life of the individual.

The operation is quite feasible and a simple one; so much so that there is need of caution lest the procedure be resorted to too readily.

It is recognized that in a great many occurrences of the disease it is hereditary. In such cases much may be done in a prophylactic way to put the patient in a condition that the gall-stones may not form. In such cases an active life should be followed and the diet and drink can undoubtedly be so devised and adopted that the tendency will be avoided.

The early recognition will eventually be made possible by an understanding of the nature and course of the development of the gall-stones that the disease will be greatly modified by the diet.

Book Notices.

Schmidt on Venereal Diseases—Lea's Series of Medical Epitomes. A Manual of Genito-Urinary and Venereal Diseases for the use of Students and Practitioners. By Louis E. Schmidt, M. D., of the Polyclinic. In one handy 12mo. volume of 250 pages, with 21 illustrations. Cloth \$1.00. net. Lea Brother's & Co., Publishers, Philadelphia and New York, 1902.

The value of epitomization will not be disputed. Rightly performed it furnishes a convenient help to a mastery of the essentials of any subject, thus affording a basis upon a knowledge of details can be securely built.

Dr. Schmidt's little work, the first volume of Lea's Series of Medical Epitomes, furnishes an excellent example of what a useful epitome should be.

He has furnished a compendious treatise written in clear, intelligible language, and covering the essentials of his important subject in its modern development. The book treats in sufficient detail of Venereal and Genito-Urinary diseases, together with their direct and remote complications. The first portion of the book is devoted to Syphilis and Chancroid, while all of the other diseases are described under the heading of

Genito-Urinary affections. In this latter section a very valuable feature is the description of the general complications of all Urinary Diseases, whether directly or remotely associated with Syphilis, Chancroid or Gonorrhea. Throughout the work all questions of Diagnosis have been made especially clear, for the reason that in the treatment of all affections of the Genito-Urinary tract, the element of diagnosis is most important and the real foundation for success.

Dr. Schmidt has adapted the work especially to the needs of medical students, but it will be found peculiarly convenient as a ready reference work for the physician who wishes to refresh his memory or to post himself on the most recent knowledge on the subject.

For the convenience of students who desire to form quiz classes, a series of questions is appended to each chapter. Illustrations are used whenever they can serve to clarify the text.

Diseases of the Pancreas and their Surgical Treatment. By A. W. Mayo Robson, F. R. C. S., Senior Surgeon, Leeds General Infirmary; Emeritus Professor of Surgery, Yorkshire College, Victoria University, England; and B. G. A. Moynihan, M. S. (Lond.), F. R. C. S., Assistant Surgeon, Leeds General Infirmary; Consulting Surgeon to the Skip-ton and to the Mirfield Memorial Hospital, England. Handsome octavo volume of 293 pages, illustrated. Philadelphia and London: W. B. Saunders & Co., 1902, Cloth, \$3.00, net.

This work, dealing with the surgical aspect of pancreatic disease, has been written with a two-fold object: to record and to review the work done in the past, and to indicate, so far as possible, the scope and trend of future research. We can state freely and unreservedly that the objects aimed for could not have been better accomplished. It is only within recent years that any material progress in regards to our knowledge of the functions and diseases of the pancreas has been made, and a work like the present volume, the combined efforts of two such distinguished surgeons, will most certainly be welcomed by the profession.

The work is an excellent one, and besides containing a commendable exposition of the various diseases and injuries of the pancreas, it includes an accurate account of the anatomy, abnormalities, development, and structure of the gland. We endorse the work most heartily, and believe every physician and surgeon will find its perusal of unusual advantage.

A Text-Book of Diseases of the Eye. A Hand-book of Ophthalmic Practice for Students and Practitioners. By G. E. De Schweinitz, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania, etc. Fourth Edition Revised, Enlarged, and Entirely Reset. Octavo volume of 773 pages, with 280 text-illustrations and 6 chromo-lithographic plates. Cloth, \$5.00 net, Sheep or Half Morocco, \$6.00 net.

This book has attained its fourth edition which is sufficient proof of its deserved popularity. Written in the hope that it would prove of service to both students and practitioners, it has more than fulfilled all expectations. The methods of examining the eyes, and the symptoms, diagnosis, and treatment of ocular diseases have received the largest share of attention. The subject matter has been given in greater detail than is customary in books of its scope, doubtless because the author, being a teacher of wide experience, recognized more fully than others, the knowledge requisite for the successful practice of ophthalmic science. In this new edition the text has been thoroughly revised, and the entire work has been reset, many new chapters have been added, such as Thomson's Lantern Test for Color-Blindness; Hysteric Alopecia of the Eyelids; Metastatic Gonorrhea Conjunctivitis; Grill-like Keratitis (Haab); the so-called Holes in the Macula; Divergence-paralysis; Convergence-paralysis, and many others. A large number of therapeutic agents comparatively recently introduced, particularly the newer silver salts, are given in connection with the diseases in which they are indicated. The illustrative feature of the work has been greatly enhanced in value by the addition of many new cuts and six full-page chromo-lithographic plates, all most accurately portraying the pathologic conditions which they represent. There is no question that this fourth edition will attain the same popularity as did its predecessors.

Bacteriological Technique. A Laboratory Guide for the Medical, Dental, and Technical Student. By J. W. H. Eyre, M. D., F. R. S., Edinburg; Bacteriologist to Guy's Hospital, and Lecturer on Bacteriology at the Medical and Dental Schools, etc. Octavo of 375 pages, with 170 illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$2.50, net.

This book is an excellent one. It presents, concisely yet clearly, the various methods at present in use for the study of bacteria, and elucidates such points in their life-histories that are debatable or still un-

determined. Moreover, it does not encumber the student with the many uncertain methods usually crowded into books of this kind; only those being included that are capable of giving satisfactory results even in the hands of beginners.

The excellent and appropriate terminology needs but a trial to convince one of its extreme utility; and inclusion in an elementary manual is calculated to induce in the student habits of accurate observation and concise description.

The illustrations are numerous and practical, the author considering, and rightly so, that a picture, if good, possesses a higher educational value and conveys a more accurate impression than a page of print.

The work is not intended for the medical and dental student alone, having been designed with the needs of the technical student generally constantly in view, whether he be of brewing, dairying, or agriculture.

Of the many laboratory guides and technical manuals constantly being issued, this is, without question, for a book of its pretensions, the best that has reached us.

Diseases of the Bronchi. By F. A. Hoffmann, of Leipsic. **Diseases of the Pleura.** By Dr. O. Rosenbach, of Berlin. **Pneumonia.** By Dr. F. Aufrecht, of Magdeburg. Edited, with additions, by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania. Handsome octavo volume of 1030 pages, illustrated, including 7 full-page colored lithographic plates, Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$5.00 net; Half Morocco, \$6.00 net.

This, the fourth volume to be issued of Saunders' American Edition of Nothnagel's Practice, fulfils all expectations. The eminent authors of the valuable monographs which comprise this volume had, by their breadth of learning, their exhaustive research, and extensive practical experience, made their essays almost complete as originally written. Nevertheless, the author in the light of recent research, has made numerous valuable additions, so that the American edition represents the present state of our knowledge on the subjects under discussion. Among other things, these additions include new matter on the anatomy and physiology of the bronchi; on foreign bodies in the tubes; on the pathology, bacteriology, and treatment of bronchitis, and the recent researches on bronchiectasis and on eosinophilia in asthma.

Much new matter has been incorporated into the section on pneumonia, including the recent work of Hutchinson and others on the blood and urine of that disease. In the pleurisy section will be found an account

of the latest bacteriologic studies, and references to the work of Morse on the leucocytes in pleurisy, to that of Williams and others on X-ray diagnosis, and to the Litten phenomenon. The work in every particular is thoroughly up-to-date, and no criticism is possibly but praise.

A Nurse's Guide for the Operating Room.

By Nicholas Senn, M. D., Ph. D., LL. D., Professor of Surgery, Rush Medical College, in affiliation with the University of Chicago; Attending Surgeon to the Presbyterian Hospital; Surgeon-in-Chief St. Joseph's Hospital, etc. Published under the direction of the Sisters of Charity, St. Joseph's Hospital. Pages, 131. Price, \$1.50 net. W. T. Keener Wabash Ave., Chicago. 1902.

This little book, while written as a text-book for nurses, being as a matter of fact an abstract of the lectures given by the author to the training class at St. Joseph's Hospital, should be almost as valuable to physicians, since it deals largely with the details of surgical technique. Among the subjects considered are anesthesia, intravenous infusion, drainage and drainage material, sterilization and disinfection, the preparation of dressings, sutures and antiseptic solutions, the preparation of patient, room, instruments, etc., for major operations, after-care, diet and wound complications. These are also special directions for all kinds of operations, from the opening of an abscess to the amputation of a breast or a leg. The writer's familiarity with all these subjects is the best of evidence as to worth of the book.

A Text-Book of Pathology and Pathological Anatomy.

By Dr. Hans Schmaus, Professor in the Pathological Institute at Munich. Translated from the sixth German edition by A. E. Thayer, M. D., Instructor in Pathology, and edited, with additions, by James Ewing, M. D., Professor of Pathology in Cornell University Medical College, New York. In one octavo volume of 597 pages, with 351 illustrations, including 35 colored inset plates. Cloth, \$4.00, net. Lea Brothers & Co., Publishers. Philadelphia and New York.

This work has won the foremost place in Germany, where Pathology is valued as of paramount importance, and is studied with corresponding results. The reason for its great popularity—six editions in the original having already been demanded—is easily discernible upon examination of the volume now for the first time presented in English. It is conspicuous for its close adaptation to the needs of students and

practitioners alike. The author has written a compact, comprehensive book, embodying every important principle and fact, clearly stated and illustrated with an exceedingly rich series of engravings and colored plates. Instead of a mass of discursive or argumentative matter and of the pursuit of personal opinions, Dr. Schmaus has given a clear, concise statement of present knowledge, amplified with a rich array of aptly-chosen instances and references, never before equaled in a text-book on this subject.

The intrinsic worth of the volume to English-speaking students and practitioners has been still further increased by the work of the Editor, Dr. James Ewing, Professor of Pathology, Cornell University, the wonderful success of whose recent work on the Pathology of the Blood furnishes ample evidence of his peculiar fitness for the task, as well as by Dr. Thayer's very clear translation, throughout which the merits of the original have been admirably retained.

The American Text-Book of Obstetrics.

In two volumes. Edited by Richard C. Norris, M. D.: Art Editor, Robert L. Dickinson, M. D. Second Edition, Thoroughly Revised and Enlarged. Two handsome imperial octavo volumes of about 600 pages each; nearly 600 text-illustrations, and 49 colored and half-tone plates. Per 1 vol.: Cloth, \$3.50 net; Sheep or Half Morocco, \$4.00 net.

This is a work for the student and practitioner alike. It makes clear those departments of obstetrics that are at once so important and usually so obscure to the medical student. The obstetric emergencies, the mechanics of normal and abnormal labor, and the various manipulations required in obstetric surgery are all described in detail, and elucidated with numerous practical illustrations.

Since the appearance of the first edition many important advances have been made in the science and art of obstetrics. The results of bacteriologic and of chemiologic research as applied to the pathology of midwifery; the wider range of surgery in treating many of the complications of pregnancy, labor, and the puerperal period, embrace new problems in obstetrics, some of which have found their place in obstetric practice. In this new edition, therefore, a thorough and critical revision was required, some of the chapters being entirely re-written, and others brought up to date by careful scrutiny. A number of new illustrations have been added, and some that appeared in the first edition have been replaced by others of greater excellence.

By reason of the extensive additions the

new edition has been presented in volumes, in order to facilitate ease in handling. The success primarily achieved unquestionably awaits this present edition, as we know of no more commendable work on the subject.

Quiz-Compend No. 4.—A Compend of Human Physiology, Especially Adapted for the use of Medical Students. By Albert P. Brubaker, A. M., M. D., Adjunct Professor of Physiology and Hygiene in the Jefferson Medical College; Professor of Physiology in the Pennsylvania College of Dental Surgery; Lecturer on Anatomy and Physiology in the Drexel Institute of Art, Science and Industry; Fellow of the College of Physicians of Philadelphia. Eleventh edition. Revised and enlarged. With illustrations and a Table of Physiologic Constants. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street, 1902.

This edition of the above compend treats in a masterly style of one of the most important branches of medical science. The author has made some important changes in the text by the revision of old and introduction of new paragraphs, bringing the work thoroughly in line with the most advanced research. He is also familiar with the needs of the medical student and devotes his attention to the essentials of this branch of medical science. The student will find in this little book all that he must know, without burdening the memory with unnecessary details. The subjects are conveniently arranged and clearly presented in the most concise and expressive language. As an aid to the medical student in the lecture room, this compend stands without a rival. The price is 80 cents, net.

Practical Gynecology, Obstetrics, and the Menopause. By A. H. P. Leuf, M. D., Philadelphia. Three parts, complete in one volume of 326 pages. Price, cloth, \$2.50. Published by the Medical Council, 4105 Walnut Street, Philadelphia, Pa., U. S. A.

The true key to this work may be found in the following extract from the preface:

"A treatise upon any subject should be more than a mere dictionary of terms and methods; it should teach principles and their application; should indicate lines of thought; should stimulate investigation."

PART I. The General Practitioner His Own Gynecologist.—In the "Foreword" to this department the author plainly shows the great value to the family physician, both professionally and financially, of a thorough knowledge of the science, and competent skill in the art, of gynecology. He also argues its reasonably easy attain-

ment. The doctor should do all he can safely and correctly of his own work in diseases of women, rather than refer his patients to specialists for minor work which he could often do even better himself."

The author starts this department by detailing the simple and inexpensive instrumental outfit required, showing the uses of each instrument. In regard to a gynecologic chair he says:

"Gynecologic chairs are an expensive nuisance. I have owned two, and would not have another. The table I use cost me \$4 00, second hand, and I prefer it to any chair in the market. The man who buys an expensive chair with which to impress his patient is deluded, unless he has no ability to impress her with his skill by giving relief. Remember, the price of this unnecessary ornamental piece of furniture will buy all the instruments one needs, with money to spare."

The author then takes up Examinations, Diagnosis and Treatment of diseases of women in proper sequence, not going into controversial matters, but giving only the practice which in his own hands has been most successful. It can be used as a working guide to the physician in his daily practice. The language is direct, plain, concise, using the fewest possible words to express the meaning.

PART II. Common Sense in Obstetric Practice.—In the "Foreword" to this department the author shows vividly the extreme importance of the doctor's being so thoroughly prepared in the technique of obstetrics that he will be able to meet the various emergencies that arise in which prompt, skillful work may save one or both lives, and the possession of which skill alone distinguishes the physician from the ordinary midwife and justifies the public in employing him at a greater cost. It also decries the too common burlesque often prevailing in the lying-in room. The chapters deal successively with the following subjects: Requisites to success in Obstetric Practice, including Personal Factors, both of patient and physician, Preliminary Period, etc.; Diagnosis of Pregnancy, with especial reference to the Earliest Possible Diagnosis; Care of Pregnant Women, including Diet, Exercise, Hygiene, etc.; Preparation for Labor, in which the usual complicated paraphernalia and preparations are greatly simplified, to the convenience of the physician and benefit of the patient; Diseases of Pregnancy, very fully and completely discussed, practical help in treatment; First Stage of Labor, including anesthesia, general and local; Second Stage of Labor, very fully discussed, including instrumental interference, saving the perine-

um, hemorrhage, etc.; Third Stage of Labor, including the Management of the Placenta in the normal and various abnormal conditions, Inverted Uterus, Lacerations, Obstetric Binder, Post-partum Hemorrhage, etc.; a very complete chapter on the Duty of the Obstetrician after Labor, an other on Complications, one on Obstetric Operations, concluding with one on The Child. The physician who reads this work will be seized with a new enthusiasm to resume his obstetric work with an earnestness never before experienced, and with a well-founded confidence in his ability to do far better work and enhance his reputation in his community as an obstetrician.

PART III. *The Change of Life in Women*.—The great object of the author in this part is to relieve this much-misunderstood subject of the mystery with which it is invested in the minds of both the laity and a large part of the profession, and to show the plain physiologic laws by which all its supposedly mysterious manifestations are easily explained, leading naturally up to the logical, and in the vast majority of cases successful, treatment. Not only is this work intensely interesting as a profound study of the human system in its most capricious period, but its mastery will enable the physician to guide the most of these cases safely and pleasantly through its most trying epoch to the final establishment of even better health than they have for years previously enjoyed, thus justly earning his fees and winning the confidence, gratitude and moral support of these most influential members of the community.

These three subjects are most appropriately grouped together in one volume as a desk companion to the physician in his treatment of female patients in all the conditions and emergencies peculiar to the sex.

The Physician's Visiting List, 1903-1904.

With this edition The Physician's Visiting List enters upon the fifty-second successive year of its publication. This is a record which tells its own story.

In addition to the numerous other valuable features for which this little work is noted, we wish to specially call attention to two new features, namely, the pages on Incompatibility, chemic, pharmaceutic, and therapeutic, and the Immediate Treatment of Poisoning. We believe these additions will enhance considerably the value of the Physician's Visiting List as a pocket record book and ever-handly reference guide for the medical practitioner. Price, \$1.00, Published by P. Blakiston's Son & Co., Philadelphia.

Transactions of the State Medical Associations of Texas, 1902.

This is the largest volume of transactions this society has ever issued. It is substantially bound in cloth and is a handsome book of about six hundred pages, with many beautiful illustrations.

Dr. H. A. West, of Galveston, is Secretary. He has held this office for many years and is very popular and proficient.

Literary Notes.

The November issue of the *Annals of Surgery* presents a varied and most important series of articles and well illustrates the active and high character of the surgical work of the present day, especially among American surgeons.

The representative character of this journal is well emphasized as one notes the many and widely separated centres from which the various articles are drawn. The South is represented by Harris of Chattanooga, and White of Savannah; the middle West by Bryson of St. Louis, Bartlett of Chicago, and Ransohoff of Cincinnati; the North by Armstrong of Montreal, and the Atlantic coast by Whitman, Meyer and Fowler, of New York. Surgical Technique, Surgical Anatomy, Surgical Pathology, are all represented in some article.

The first original memoir of the number is by Bryson, on the Technique of Prostatectomy, in which are embodied the results of the author's work in simplifying the removal of the enlarged prostates by enucleation through a perineal incision. It is a most important contribution to the surgery of the Prostate Gland.

In the second article Ransohoff deals with the surgery of Prostatic Abscess.

Then, in an elaborate study, Bartlett describes the surgical anatomy of the Middle Meningeal Artery.

Abdominal Surgery is represented by four important contributions—one by Fowler, who describes a new method for Gastro-Enterostomy; by Harris, in a paper describing one form of intestinal Tuberculosis; by Armstrong, who discusses the surgical treatment of Typhoid Fever Perforations of the bowel; and by Meyer, who, in a most interesting and graphic manner, reports his results in the attempts to implant a new work of silver filagree to strengthen defective places in an abdominal wall.

A paper by Whitman on the treatment of Fracture of the Neck of the Femur in the young, and one by White on the identity of Proteus Vulgaris Infection and Hospital Gangrene, conclude the tale of original memoirs.

The transactions of the New York Surgical Society, at its May 28 meeting, contain the usual record of important and interesting cases which always characterize the work of this, the oldest of the surgical societies of the country.

A number of Abstract translations from foreign surgical literature are presented in the department of Surgical Progress, among which as most likely to attract attention may be mentioned the observations of Lennander on the Sensibility of the Abdominal Cavity, and the work of Straus on the Functioning of the Ureters and Kidneys as a means of surgical diagnosis.

The issue closes with a number of book reviews which are judiciously critical, written for the guidance and advantage of the reader rather than the profit of the publisher.

This number of the Annals of Surgery fully maintains the enviable reputation which this journal has so long enjoyed for high scientific worth.

Social, economic, and political topics largely dominate the Review of Reviews for November. The editor, in "The Progress of the World," gives an exhaustive review of the coal strike, while Mr. Walter Wellman contributes a graphic account of the settlement of the strike as viewed at Washington, and Mr. Frank J. Warne writes of "John Mitchell; the Labor Leader and the Man." Col. Carrol D. Wright, of President Roosevelt's arbitration commission, is the subject of a character sketch by Mr. H. T. Newcomb. Mr. Charles A. Conant writes on "The Growth of Trust Companies;" Prof. J. W. Jenks on "Self-Government in Oriental Dependencies;" and Arthur Wallace Dunn on "Government in the Philippines, 1898-1902." "Shall There be a Two Years' College Course?" is made the subject of an interview with President Butler, of Columbia, whose recent discussion of this topic in his annual report has awakened widespread interest. Dr. Albert Shaw gives a most interesting account of "A Successful Farm Colony in the Irrigation Country"—a Salvation Army enterprise. Variety is given to the number by the inclusion of two "literary" articles—a study of "The Rise of the Nature Writers," by Francis W. Halsey, illustrated with portraits; and an unsigned paper on the late Emile Zola.

The Fleming H. Revell Company, not content with publishing houses in New York, Chicago and Toronto, has now entered the British market, establishing itself in both London and Edinburgh. The methods of this house are somewhat unique

inasmuch as they do not publish at one centre alone, the other houses acting as agencies for a central establishment, but each house carries on a complete publishing department, the several houses interchanging their product. The same plan is to be followed in Britain. It may be questioned if such a system is the most economical; however, it does enable the company to keep its hand on the pulse of the various sections, and thus judge how best to supply their special needs.

Abstracts of the Leading Articles of the Month.

The Treatment of Pelvic Suppuration.

Puls (American Gynecology, September, 1902) says that the treatment of pelvic suppuration consists without exception in securing effectual drainage. In simple pelvic abscesses a vaginal incision in the posterior vault, keeping close to the cervix, is a speedy and safe procedure. Posterior colpotomy offers an excellent route for drainage. Through the vaginal opening the various smaller or larger pus sacs are broken up with the fingers or point of the scissors to allow a wide communication with the artificial outlet. Abscesses situated between the bladder and cervix may be drained by anterior colpotomy.

Paravesical abscesses and those situated in the broad ligaments pointing toward the anterior abdominal wall should be incised above Poupart's ligament, analogously to the incision for ligation of the external iliac artery. Tubal and ovarian abscesses situated above the pelvic brim are to be incised and drained through the vagina by exposure through an abdominal incision under full view, to avoid injuries to the adjacent and contiguous organs. Complete extirpation of the uterus and adnexa is advisable only in those cases in which infiltration of pus into the tissues has produced an irreparable loss of the functions of the organs of reproduction. A diseased uterus, after the removal of both appendages, becomes a useless and troublesome organ and should be also removed. Pyosalpinx or ovarian abscesses associated with uterine fibroids require complete removal and should be followed by vaginal drainage.

Our aim should be to avoid abdominal drainage and to substitute vaginal drainage. We should practice conservation in the operations for diseased uterine appendages even while they are undergoing suppurative processes, both as a life-saving procedure and if possible to secure a *restitutio ad integrum* of the pelvic organs.

The Blood in Pregnancy, Parturition, and the Puerperium.

Senger (Yale Medical Journal, October) concludes an article on this subject with the following summary; (1) During the first three months of pregnancy there is frequently an anæmia, but no hyperleucocytosis. (2) The blood during the remainder of pregnancy is usually characterized by increased number of red blood corpuscles, hæmoglobin contents, and leucocytes; the latter being especially increased in primiparæ. (3) A greatly increased leucocytosis occurs during parturition, being greater among primiparæ. (4) The hyperleucocytosis rapidly diminishes after labor, showing a slight rise about the fifth or seventh day and again about the eleventh day. (5) This hyperleucocytosis is due to the multinuclear neutrophils. (6) During the first ten days of the puerperium there is usually a diminished number of red blood corpuscles and of hæmoglobin contents. (7) There is often present a polycythæmia contents. (7) There is often present a polycythæmia after the second week of the puerperium. (8) Hyperleucocytosis disappears in normal cases by the fifteenth day. (9) Simple mastitis, suppurative mastitis, postpartum hæmorrhage, and frequently puerperal sepsis, cause a marked hyperleucocytosis above that already existing.

Nuts as Food.

The Dietetic and Hygienic Gazette is of the opinion that nuts are destined in the future to become more and more sources of food. Their great richness in nutrition, and the ease and cheapness with which they can be given, makes this certain. There is one nut, native to the Hawaiian Islands, called the candle nut, which should be added to our list of important ones. Speaking of this nut, one of the principal inhabitants of the Hawaiian Islands says: "Should you collect some of the nuts you will find them good eating, but I should advise that you stop at one or two, or you will find that you have an emetic or cathartic. The natives roast the nuts in the ashes, and, having removed the shell, crush the kernels to a paste, mixing them with salt and pepper. This is one of the most delicious and appetizing zests imaginable, and is an essential element to a good feed of raw fish and poi. It may be that if some of our enterprising capitalists would go into the manufacture of inimoni, as the natives call this paste, they might find an ever-increasing market for it. It certainly is preferable to the suspicious Russian caviare. The burnt shell of the kukui was used for making an indelible ink, with which tattooing was done. The

green husk contains an acrid juice, which has a reputation as a remedy in diseases of the throat. From the bark of the tree there exudes a gum called pilale, which is useful as gum arabic or gum tragacanth for many purposes. It was also used as medicine by the Hawaiians in cases of dysentery. Being harmless, it could be useful in confectionery in making gum drops and jujubes."

Gonorrheal Peritonitis.

Hunner and Harris (Bulletin of the Johns Hopkins Hospital), reports several cases of general peritonitis due to gonococcus infection. It is probably universally admitted to-day that the gonococcus may be the sole cause of an acute general peritonitis, but the questions of prognosis and treatment are still unsettled. They report cases showing the relative frequency and gravity of this condition in children. One patient, a child of ten years, had a gonorrheal vaginal discharge followed by peritonitis. The abdomen was opened and irrigated, but the patient died soon after the operation. Gonococci were cultivated from the peritoneal exudation. In another child of five years old pyosalpinx and peritonitis developed. Several other cases of pyosalpinx and peritonitis of gonorrheal origin are reported in females, gonococci being found in the tubes or peritoneal pus.

Their experience, together with a study of the literature, convinces them that surgical measures in gonorrheal peritonitis are of doubtful value. However, the question of differential diagnosis will always need careful consideration, and where there is reasonable doubt operation should be performed. Appendicitis must always be borne in mind. A history of gonorrhea of recent date or long duration, with the discovery of gonococci in the cervical, vaginal, urethral, or glandular secretions, should make the surgeon suspicious. If there is a history of pelvic pain and tenderness, and a mass can be felt in one or both ovarian regions, the diagnosis becomes probable. If a general peritonitis accompanies the above conditions, and has occurred immediately after the manipulation of pus tubes, or during a menstrual period, or in the puerperium, the diagnosis is almost certain. If the tubes contain pus in any quantity they should be removed. The question of removing the tubes when no pus is present must be decided by various circumstances, such as the desirability of risking preservation of the child-bearing function against future trouble from the tubes. The symptoms of acute gonorrheal peritonitis—abdominal distention, tenderness and rigidity, vomiting, high temperature and rapid pulse—are similar to other forms of peritonitis, but

the clinical course is characteristic. After an acute onset lasting one to three days the symptoms suddenly abate, and the patient makes a rapid recovery, but usually preserving an intraperitoneal exudation, pelvic adhesions, or pus tubes. In the treatment of gonorrheal peritonitis the authors recommend rest in bed, turpentine stupes, mild cathartics, liquid diet, and stimulating treatment according to the severity of the symptoms.

Subcutaneous Injection of Paraffin in the Correction of Facial Deformities.

Smith (Medical Review of Reviews, September, 1902) makes the following statement in reference to his technique in subcutaneous injections of paraffin:

1. Thorough surgical cleaning of instruments, field of operation, and hands of operator.

2. Four minims of a four-per-cent solution of cocaine is injected at the point intended for the entrance of the paraffin needle.

3. Thoroughly sterilized paraffin is drawn up into the syringe, allowed to cool to 90 deg. or 100 deg. F., and the set-screw then placed in position.

4. Needle is introduced away from the point of greatest deformity, and its point is carried forward slightly beyond this, being gradually withdrawn as injection is made, and the paraffin is slowly injected.

5. As the pressure is felt beneath the fingers, molding and smoothing the surface begins. This should be continued throughout the operation, thus preventing the paraffin collecting in lumps, giving rise to an irregular surface.

6. When sufficient paraffin has been injected the needle is removed and the point of its entrance sealed with collodion.

7. Ice cloths are applied for twelve to twenty-four hours, according to the amount of edematous swelling and inflammation which may immediately follow. Should this continue, a 25-per-cent solution of aluminum acetate applied on cloths is of service in reducing the inflammation. Pain has never played an important part in any of the writer's cases, and when desirable he has made the injections without the use of cocaine.

Rodent Ulcer.

Taylor, in the London Lancet, reports the case of a patient, eighty-two years of age, a mercantile sailor, had suffered for twenty years or more from a small chronic ulcer on the right side of his nose, causing great pain, treated without benefit with the usual remedies. Six years ago he applied caustic potash to the growth, but without benefit. When first seen in May, 1901, all

the typical clinical evidences of rodent ulcer were present, extending to the inner angle of the orbit and having destroyed portions of the lids, lacrimal and caruncle. Pain was at this time intense. The treatment was begun on May 15th. A current of three amperes was used for twenty minutes twice weekly. From June 12th the sittings were increased to four times a week. Up to August 17th healing had been very slow. On this date treatment had to be suspended because of the reaction indicated by sudden appearance of dusky red erythema about the ulcer, attended by the destruction of the newly-formed epithelium upon its surface and of the surrounding epidermis, brought about possibly by changes of the X-ray tubes from one of high vacuum to one of medium vacuum. It took five weeks for the effects of this reaction to disappear, when spontaneous healing began and was very rapid, for on October 15th the ulcer had cicatrized, with the exception of a small area which proved obstinate and where he believes the caustic potash had been used six years ago. On the date treatment by the X-rays was resumed, applied to this unhealed spot for only ten minutes three times a week. The newly-formed scar-tissue was specially protected from their action with double-lead foil shields. The treatment was completed by December 20th. At that time there was not the slightest evidence of disease and since then there has been no recurrence. It is interesting to note also that the conjunctive of the everted lower lid and that of the inner canthus were covered with a smooth layer of opaque horny epithelium and no trace of the puncta remained.

The Early Diagnosis of Paresis.

Dercum, writing in the American Journal of Insanity, recognizes the especial difficulties of the problem, because of the general disturbance which in the average case precedes by a long time the appearance of the special symptoms, denoting organic change. The patient, though easily fatigued, yet fails to present the fatigue so characteristic of the neurasthenic state.

The neurasthenic relates a long list of symptoms entirely subjective in character. The paretic rarely comes of his own volition, and his friends tell of his symptoms; it is they who suspect his illness, not the paretic himself. The neurasthenic is changed little or not at all in appearance. The neurasthenic, after a night of disturbed sleep, gets up exhausted and depressed, and is often not at his best until evening. The paretic on the other hand, though insomnia, dreams, or disturbed sleep may have been his portion, is usually at his best in the

morning, being drowsy and with other symptoms toward evening. Qualitative menereal changes noticeable in the paretic are absent in the neurasthenic. In the paretic are noted inability to fix the attention and a distaste for his usual work, irritability displayed on trifling occasions, proneness to forget, changes in habit, deficiencies in conduct, and a general dullness of the finer senses. The neurasthenic knows and observes the ordinary proprieties. The paretic early, easily, and habitually disregards them. Distinction between early paresis and alcoholism is often more difficult.

Addison's Disease Cured by Suprarenal Extract.

Deeks (Montreal Medical Journal) gives the history of a case of Addison's disease in a woman thirty-two years of age. She suffered from weakness, breathlessness, dizziness, headache, palpitation, lassitude, and loss of energy. Pigmentation was universal, but deeper where pigment normally is present, on the exposed parts, where clothing bears most heavily, as neck, hips, and shoulders; also on the mucous membranes of the lips and cheeks. There was no response to various forms of treatment instituted, and it was decided to try suprarenal extract, three grains, three times daily after meals. Improvement began immediately, and within three days vomiting and diarrhea began to lessen, and the patient began to gain strength and feel better. In two weeks she was very comfortable and enjoying her meals. Examination of the blood showed that hemoglobin had increased from 32 to 40 per cent. In three weeks pigmentation was fast disappearing. Later reports showed that she was doing well.

Best Method for Administering Quinine as a Preventive of Malarial Fever.

E. H. Read (Journal of Tropical Medicine) concludes from his experience the best way of giving quinine as a prophylactic is the following: (1) For male adults in good health, tablets in 15-grain doses every fifth day; for those in poor health, the solution used in the same way, or 15-grain powder in a tablespoonful of porridge or milk. (2) For female adults, 8 grains should be given instead of 15; pregnant women may take $2\frac{1}{2}$ grains daily, in either of the above ways, from the beginning of pregnancy. (3) Children of either sex under one year, $\frac{1}{2}$ grain of the powder every third day in a spoonful of milk, followed by a spoonful of jam or honey; those from one to five years, 1 grain every third day; from five to ten years, 2 grains every third day; from ten to fifteen years, 3 grains; above fifteen years, the ordinary adult dose, taken in the same way.

The Occurrence of Gout in the United States; With an Analysis of Thirty-Six Cases.

Futcher (Journal of the American Medical Association, October 25th) states that gout in the United States is more common than is supposed. Out of 13,400 medical cases admitted to Dr. Osler's wards in the Johns Hopkins Hospital during a period of thirteen years, there were thirty-five gout cases, or 0.24 per cent. of the total number of patients. For the same number of years at St. Bartholomew's Hospital there were one hundred and sixteen gout cases out of a total of 31,100 medical admissions, or 0.37 per cent. of the cases. Thus, among hospital patients gout is only about one-third more frequent in London than in Baltimore. All of the thirty-six patients were white males. The largest number of cases occurred in the fifth decade. Twenty-seven of the patients were native born Americans. The majority of the patients appeared to have earned rather than inherited their gout. Alcohol and lead seemed to be the most potent predisposing etiologic factors. Thirty-three of the thirty-six patients had reached the chronic stage before they came under observation. In seventeen of the cases tophi were present. Among the more interesting complications may be mentioned three cases of gouty bursitis; one case of parotiditis; one of pericarditis; one of retroceded gout with symptoms simulating intestinal obstruction. There was evidence of disease of the kidneys in the majority of cases. Albuminuria occurred in twenty-seven and hyaline and granular casts in twenty-three instances. Arteriosclerosis was present in twenty-three cases and mitral systolic murmur in five. Many gout cases are mistaken for rheumatism. Four of the cases were repeatedly diagnosed as such on the early admissions, the appearance of tophi later revealing their true nature. The series illustrate the great importance of examining the ears and the vicinity of the joints for the presence of tophi in all cases of multiple arthritis.

Treatment of Acute Infantile Bronchopneumonia.

Stevens, in the London Lancet, says that the important point in the treatment is the prophylaxis. It is to be remembered that every common cold or bronchial catarrh or gastrointestinal disorder in a young infant may pass into the exceedingly serious and fatal disease of bronchopneumonia. It is obvious then that everything should be done to prevent such an occurrence. No indisposition in an infant should be regarded lightly. The child should be carefully treated and not lost sight of till all symp-

toms of initial disorders have passed away. In particular the mother should be warned of exposing the child to cold, and of the necessity of keeping him or her warmly, though not heavily or tightly, clad. A gastrointestinal derangement should be corrected by careful directions as to diet. In the presence of the acute disorder itself the most important point to bear in mind is the fact that we are dealing with an acute generalized inflammatory disease of the respiratory apparatus, the immediate tendency of which is to produce great exhaustion of the vital powers. The disease is very essentially one of debility, and treatment should aim to maintain nutrition and stimulate the failing heart. All the measures tending to depress the child should be strictly avoided, and for this reason emetics are not to be used. Place the child in an airy room, well warmed, and if it can be easily managed, let the air near his bed be moistened from the steam of a bronchitis kettle, which will often be found to have a marked effect in soothing a cough. Do not load him with clothes to keep him warm, and avoid compression of the chest and abdomen by flannel binders. Two or three plain linseed poultices in the course of twenty-four hours applied back and front are often of service as mild counter-irritants. Feed the child with milk diluted or peptonized, and check diarrhea by subnitrate of bismuth, combined if necessary with one or two Dover's powders. Alcoholic stimulants are almost always necessary, but they should be strictly supervised by the medical practitioner, ordered by him as occasion demands, and prescribed in minims, not in drachms. A mixture containing from half a grain to a grain of carbonate of ammonia and two minims of digitalis in each dose, made up with syrup, may be given every three or four hours. The child should be constantly watched by a competent nurse, and should be occasionally held up to relieve breathing.

Note on the Sterilization of Catheters.

Drs. Nancrede and Hutchins (Medical News) after a number of experiments they draw the following conclusions:

1. That an infected soft-rubber catheter cannot be completely sterilized by boiling under four and one-half minutes.

2. Mechanical cleansing from all dried pus, coagulated blood, or mucus, will render sterilization easier, and will demand a shorter time to be effective.

3. Elastic (English web) catheters and soft-rubber catheters can be repeatedly boiled for five or more minutes without roughening of their surfaces or diminution of their elasticity and strength.

4. Chemical sterilization by immersion in a 1:2000 mercuric chloride solution for

five minutes does not sterilize any variety of catheters which has become infected, at best only inhibiting the growth of the germs, for if the mercuric salt be precipitated by ammonium sulphide the germs will grow freely when implanted in culture media.

5. The results of experiments indicate that chemical sterilization should never be employed for catheters which are to be retained in the bladder for some time, unless subjected to a very prolonged action of the mercurial salt, lest the merely inhibited germs develop.

6. Should corrosive sublimate be employed for the sterilization of catheters, it must be in a concentrated solution, and the catheter must remain in it for a much longer time than the usual period considered amply sufficient in the laboratory, no mere washing with any chemical solution being efficient for an infected instrument.

7. Formalin vapor will sterilize infected instruments in twenty-four hours; how much shorter time will be sufficient has not yet been fully determined.

8. All methods of sterilization commonly employed should be continued for much longer periods than the minimum time required for destruction of germs in the laboratory.

9. English web catheters can apparently be more readily sterilized by heat than can soft-rubber catheters, probably on account of their interior construction.

Remarks on the Diagnosis of Pregnancy in the Early Months.

Charles Jewett, in the Medical News, says:

"The best evidence of uterogestation at whatever period, is to be sought in the character of the uterine tumor." During the early months of gestation, palpation is addressed to the uterus *per se*, in the later months to the growth it contains. Obvious changes in the uterus incident to pregnancy are not marked before the sixth week. The diagnostic properties of the uterine tumor are as follows: (1) Softening of the cervix; (2) size of the body and progressive growth; (3) Hegar's sign; (4) relative density of the median and lateral sections of the isthmus; (5) asymmetry and differential density of the body; (6) consistence and shape of the body as a whole.

In the gravid uterus within this period the middle portion is less dense than those on either side of it,—a change generally well marked by the fifth or sixth week. When clearly defined, Hegar's sign may generally be regarded as absolutely diagnostic. In a single instance in the writer's experience Hegar's sign was found perfect-

ly developed in a case of puerperal metritis. In many women the difficulties of the bimanual examination make this sign of little or no value. It may sometimes be made out in such cases by means of the recto-vaginal method. While the sign is looked upon as one of the most important when well made out, Jewett thinks its practical value is less than that of the shape and consistence of the body of the uterus. It is not so readily appreciable as the latter. An apparently almost jelly-like consistence of the corpus together with a width often two or three times its anteroposterior thickness, makes the diagnosis of uterogestation. In no other condition than pregnancy in the softening so marked, and no other evidence of pregnancy between the fifth and tenth weeks equals in diagnostic value anteroposterior flattening and consequent broadening of the corpus.

The Artificial Feeding of Infants.

Blackader in the Montreal Medical Journal mentions the following practical points: An infant fed at the breast, who suffers persistent indigestion and at the same time fails to gain in weight, should be taken from that breast. If, however, the infant gains its weight, it is better to try and correct the indigestion by treatment directed to both mother and child. To attempt artificial feeding, in such a case often only adds to our troubles. In commencing artificial feeding, begin with a weak mixture and work up by frequent but slight changes to a point of tolerance. By still continuing a gradual but steady increase, never beyond the point of easy digestibility, we can in a few weeks attain to a food sufficiently nutritious in all its ingredients and yet fully digestible and assimilable. It is a serious mistake to begin on a mixture too strong, and work down, after weeks of indigestion, to the point of tolerance. The question how long an infant should be kept on a modified-milk diet is an important one. It is generally conceded that by the tenth or twelfth month a child should be able to digest almost pure milk. By this time, however, the author prefers a mixed dietary. Milk is very deficient in iron. An infant comes into the world with a high percentage of hemoglobin; this gradually diminishes so long as he is fed on milk alone. Only when a mixed diet is substituted for a pure milk diet does the percentage begin to rise again. Cereals and meat juice and broths are rich in iron. Oatmeal is among the richest in iron of the cereals, and, properly cooked, forms a useful addition to the infant's dietary. Shortly after the first twelve months, eggs, lightly cooked, may be permitted at one of the meals in the day.

The great richness of the yolk in fat, lime salts, and in the organic compounds of phosphorus and iron, makes it a valuable food for the rapidly developing child. At this period, also, food involving somewhat long mastication, such as biscuits and crusts of bread, becomes necessary. The process of mastication develops the maxillary bones and the associated muscles, while disuse of the jaws starves the area supplied by the maxillary arteries, leading to their imperfect development. The bone remains small, the teeth are crowded and imperfectly nourished, and dental caries, so disastrous to the growing child, becomes inevitable.

Rheumatism in Children.

Gossage (The Clin. Jour.) says that in the treatment of rheumatism in the child we have rather different problems to face than in the adult. Only rarely have we urgent pain and high fever to relieve. What is required of us is to prevent, if possible, cardiac inflammation, to prevent the valves being permanently damaged should the heart unfortunately be involved, and to prevent a recurrence of rheumatism. In this connection we must remember: (1) that rheumatism in children is specially prone to recur; (2) that it is specially prone to involve the heart, and that this liability is increased with each successive attack; (3) that a complete recovery after an attack of cardiac inflammation is, perhaps, more frequent in the child than in the adult; (4) that we are better able to prevent a patient from being attacked by rheumatism than we are able to prevent the heart being affected after a rheumatic attack has commenced. In the prevention of a recrudescence of rheumatism personal hygiene plays a very important part. Patients should avoid living in low-lying damp places, and be careful not to get their clothes wet and not to remain in wet clothes. Salicylates should be given frequently, every three or four hours, in full doses (three-quarters of a grain for every year of the child's age), until the active signs of rheumatism disappear, and then similar doses three times a day for one or two weeks. Where the heart has already been involved the main hope in promoting recovery from cardiac inflammation must lie in giving the heart as little work as possible. The patient should lie supine in bed and remain so for a lengthy period after the subsidence of the rheumatic attack, *e. g.*, at least a month. This enforced rest may be conjoined with Dr. Caton's treatment, which consists in giving sodium iodide in appropriate doses and applying small blisters repeatedly in the lines between the middle of the clavicle and the nipples on each side.

Therapeutic Value of Work in Hysteria and Neurasthenia.

Sidney I. Schwab (*Interstate Medical Journal*) says that the work cure can be tried with hope of success in that class of neurasthenic and hysterical subjects where there exists an average amount of potential physical vigor, where there is no organic nervous or other disease, and where, above all, there is found the requisite amount of intelligence and mental training to enable them to appreciate and understand the purpose and the meaning of the efforts made to hold them. In his experience he has found very few who might not have been treated in the manner indicated if the patient's circumstances and the patience of the physician had been used to their utmost. Monier, from an experience of thirty-four cases, concludes that by means of useful manual work, hysteria and neurasthenia, in the narrowest sense of the term, can often be made to completely disappear. In cases of mental enfeeblement, psychopaths, alcoholics, according to the time of their existence, the influence of work is often very remarkable. Hypochondriacs and paranoiacs are not especially benefited. He reports the case of a woman of intelligence, but suffering from aggravated hysteria, which it seemed impossible to overcome. Book-binding, which requires the closest attention and the greatest care in matters of detail, and which is distinctly a fine art, was tried, and has proved to be the needed remedy. There is little doubt that in less than a year the previously hysterical invalid will be able to set up her own shop and lead a useful and active life.

Intussusception.

Francis Huber, in the *Archives of Pediatrics*, says that injections and operative measures are rival methods of treatment. Progressive surgeons, particularly in hospital practice, favor early abdominal section. Injections, including inflation of the bowels with air or distention by hydrostatic pressure, have been advised, first, for the purpose of reducing the invagination; second, with the object of lessening the size of the tumor, and thereby limiting the field and simplifying the subsequent operation. Finally, in occasional cases, the sufferings of the patient are lessened by the use of an enema prior to operation. At present the tendency is to limit the employment of injections to the early stages—that is, not later than twelve to twenty-four hours from the onset of the symptoms. It is recognized that the longer the condition has existed the greater the dangers of pressure from within. If not successful immediately, further attempts ought to be given up and abdominal section resorted to

without delay. Edmond Owen emphatically writes: "I deem it nothing less than a calamity that physicians now and then manage to chase back an intussuscepted piece of bowel by using an enema." Whether inflation by air or hydrostatic pressure be preferred, the following objections or disadvantages are apparent. 1. It is impossible to gauge the amount of pressure. 2. Except in the earliest cases, it is not possible to exclude beginning gangrene, which, as shown by the results of operation, may take place very early. 3. The reduction is not always complete. The tumor may disappear, the symptoms abate, to recur again in a few hours. There is always an element of doubt, consequently the procedure has been termed uncertain and dangerous, haphazard and therefore unscientific. When disinvagination has been successful the relief is immediate. The anxious, pallid look disappears and with it the evidences of collapse. The abdomen assumes a normal contour. Sometimes fecal movements and the escape of gas closely follow upon reduction. Relapses are not uncommon. As to subsequent treatment, the patient should be kept absolutely quiet with opium, and an abdominal bandage, just tight enough to steady the bowels, must be applied.

John F. Erdman (*ibid.*) is positive that surgical interference is the only treatment when a case has passed the twelve-hour period of duration. In several cases upon which he has operated in which lacerations or ruptures of the serous coat have been found, it has seemed to him that this condition was due to hyperdistension of the bowel by water or air rather than to the distension of the gut by the intussusception. The shock present in many of these cases is not a contraindication to operation, but calls for more rapid work in reduction by surgical means. After the operation the child recovers rapidly from the shock. The operation is a simple one, requiring asepsis and expedition more than anything else during the first twenty-four hours, and rarely, except in the long-standing cases, is excision of the gut required. The position of the incision depends to a degree upon the presence of the tumor, although the author rarely finds it necessary to open except the right rectus, and usually selects this region for the reason that the final portion of gut to be reduced is usually in the ileocecal region. Furthermore, all ordinary manipulations in any part of the abdomen can take place through an enlargement of this incision. In reducing the condition two things for success must be remembered: First, never pull the proximal end with the idea that reduction will be accomplished.

This type of manipulation is more productive of tears of the coats of the intestines than it is of producing the end desired. Second, and the most important point to remember, is that reduction is only produced by pressure upon the apex of the mass through the gut at the distal extremity, gently guiding the proximal end. Should adhesions between the entering and the receiving gut prevent the reduction, then the passing of a blunt instrument between these portions is usually attended by success. Recovery can be assured in most cases of less than one day's standing; in cases of two days and more than one the majority recover; in cases over two and up to three days a fair percentage recover, while in cases of over three days the prognosis is bad. From the literature to date, no case of excision of intestines in children under one year has been successful. The mortality in all cases is from 20 to 50 per cent.

Neurasthenia and Insanity.

Allbutt (British Medical Journal, Oct. 18, 1902) says that neurasthenia is an individual weakness by which exhaustion takes place over repair and a lowering of the nervous potential with imperfect recovery. The writer compares it with hysteria, which is a special abnormal interference with special inhibitions. Hypochondriasis is not a step between neurasthenia and insanity, nor is it insanity, though close to it. It consists in a fixed idea which seems to closely approach delusion, but does not cross the narrow line as often as might be expected. Neurasthenia with obsessions he is inclined to think is nearer insanity, especially when they are such as an internal call to do some wrong or to satisfy some morbid desire are they more characteristic of insanity than neurasthenia. The relation of neurasthenia to insanity requires close attention to diagnosis and he distinguishes the early stages of melancholia or delusion insanity or paralysis which may simulate it very closely. He says that the memory in neurasthenia loses its tenacity, the attention is enfeebled, sharply defined breaches of memory are more characteristic of hysteria or epilepsy, and he has never seen them in neurasthenia. Depression of spirits, if primary and persistent, is more characteristic of melancholia or hypercondriasis. Of late years he has observed a sort of post-operative neurasthenia following certain operations, not always severe ones, more common in women than in men. It is very like the neurasthenia of railway cases, and whether due to the anesthetic or mental strain, etc., is hard to say.

The Obstetric Aspects of Idiocy.

William Gillespie in the Cincinnati Lancet Clinic, Sept. 27, 1902, concludes an interesting article as follows; The more frequent use of forceps with the object of preventing asphyxia will tend to decrease the percentage of idiots to the general population; infantile cerebral palsy and spastic rigidity or paralysis of spinal origin will become less frequent in proportion to the success of our efforts to prevent asphyxia; although congenital deafness is sometimes due to malformation of the auditory mechanism, there can be no doubt that some cases are due to injury during parturition, and the percentage of such unfortunates in the community may be lessened by the rational management of labor; in thoroughly developed children asphyxia occurs before birth, in the premature it usually develops after birth; a clinical distinction may be made between cases when cerebral injury results from asphyxia and those in which asphyxia results from cerebral injury, from the fact that in the former the circulation is disturbing from the beginning, while in the latter disturbance of the circulation follows respiratory failure. If cases are found where cerebral injury is plain and yet there is coincident disturbance of both functions it is probable that both trauma and asphyxia are at work. This point is important in that it enables us to judge with some degree of accuracy where we have been unskilful, thus assisting in the formulation of a proper operative technic; in children who have inherited a neurotic tendency idiocy may follow an injury which would not have had such serious consequences in one that was descended from more stable stock; while injury from forceps is not a very prominent cause of mental defect or infantile cerebral palsy, and their judicious use constitutes our best preventive treatment, there can be no doubt that in exceptional cases these conditions are to be ascribed to their use. It is therefore imperative that those who work in this department not only study carefully the conditions which call for their use, but that they acquire the skill and judgment necessary for their application, in order that we may have the maximum of benefit with the minimum of injury. It is probable that in most cases where instruments produce cerebral injury it is their abuse and not their use; finally, for every case of idiocy or infantile palsy resulting from asphyxia we have many fetal deaths which might have been prevented by more skilful obstetrics.

Pleurisy.

Hunter (Interstate Medical Journal, Oct. 1902) says that at least 50 per cent. of the cases of pleurisy are tuberculous, judging from his study of the literature and his personal experience. The doctor does not consider it, however, necessarily gloomy in prognosis as a pulmonary affection is not inevitably the result. The writer suggests climatic treatment in tuberculous pleuritis, and thorough anti-tubercular regime. Cases in which it is a question of removal of an effusion are sometimes puzzling, but the effusion is frequently more or less rapidly absorbed. When the dyspnea is not urgent and the cardiac impulse in normal position, it is prudent to wait, although the quantity of fluid may be quite extensive. The restriction of fluids and the use of saline cathartics, diuretics, massage and "flying" blisters may be tried. The author quotes the following indications for paracentesis from Fowler: "1. When there are signs of positive intrathoracic pressure; 2, when the following symptoms which usually accompany the above condition are present—a small, irregular pulse and urgent dyspnea, palpitation on slight exertion, lividity, or evidence of engorgement and edema of the opposite lung. These symptoms may, however, be absent in cases accompanied by positive intrathoracic pressure so long as the patient is perfectly still. 3. When the fluid has been ascertained to be purulent its removal is necessary in all acute cases. It may be necessary to remove the fluid more than once, but only a few repetitions can be borne by the patient without impairing his strength. In aspirating, strict antiseptic precautions must be observed. The needle or the canula—if a trocar be used—should be about one-tenth of an inch in diameter and about three inches long." The usually selected positions are between the sixth and seventh ribs in the mid-axillary line or between the ninth and tenth, just outside the line of the angle of the scapula. The fluid should be withdrawn slowly and careful watch be kept on the action of the heart and the respiratory movements,

Accidental Hemorrhage.

W. Frank Colclough (Jour. Obst. and Gyn. Br. Emp., Aug.) says that rupture of the membranes is only safe when the uterus is contracting vigorously and is capable of keeping up the necessary rhythmical contractions to prevent hemorrhage. In all severe cases the danger is due to the fact that the uterus is incapable of contracting down upon its contents. The objection that plugging the vagina converts an external hemorrhage into a concealed is only

valid if the uterine walls are incapable, directly or indirectly, of withstanding a pressure within them equal to the arterial pressure. If the uterine walls are so diseased that they distend as the result of intrauterine pressure, then it is claimed that the plug and binder, applied in the proper manner, render the uterus capable of withstanding the pressure of the escaping blood. The plug and binder control hemorrhage, and opportunity is given to the patient to rally, if possible. They delay the rupture of the membranes by supporting the cervix and the dilating os when dilatation commences. Delivery will be natural, for it will not take place until the uterus contracts with sufficient vigor to expel its contents. The risk of postpartum hemorrhage is done away with.

Eczema Due to Intestinal Intoxication.

Dr. Nelken (N. Y. Med. Jour.) suggests the following in cases of intestinal auto-intoxication:

R. Hydrarg. chloridi mitis	gr. i	66
Salol	gr. xx	30
Guaiaicol carb	gr. xv	1
Pulv. pepsini	gr. xxx	2

M. Ft. Chart. No. xii. Sig.: One powder to be taken three times a day. A restricted diet is recommended by the author; greasy food and sweets as well as fruits and pastry in any form should be forbidden. The following ointment is applied locally:

R. Aq. picis liq.	3i	4
Ung. aq. rosæ	3i	30
Ung. zinci oxidi	3ii	60

M. Sig.: To be used locally night and morning; washing with plain water is forbidden, but twice a week water with which sufficient bran has been added to make it milky should be used, and the face kept clean with a cloth saturated with olive oil.

Dislocation of the Hip During Normal Labor.

L. B. Newton (The Medical Age, Sept. 25, 1902) describes the case of a woman, 27 years of age. During her last accouchement the physician in attendance, for "fear of exhaustion and to save time," rendered an instrumental delivery. Although the patient complained of pain in the left hip, after recovering from the anesthetic and for a day or two subsequently, the physician did not make an examination. In due course of time an abscess appeared $1\frac{1}{2}$ inches below Poupert's ligament, in close proximity and to the left of the femoral vessels. At the expiration of three weeks the first physician was discharged, and a second called in who opened the abscess.

The author was eventually called in and ascertained the above history. The writer found the woman emaciated and markedly debilitated. The hip and thigh were swollen and painful, the abscess discharging pus. The hip was so swollen and tender that it was impossible to make an examination of it. On palpitation, fluctuation was felt from the crest of the ilium to within four inches of the knee. The thigh was flexed at a right angle with the body, and the leg at a right angle with the thigh, the foot inverted. When the abscess had healed and the swelling about the thigh had greatly diminished the dislocation was reduced. By the manipulation of the leg in the adjustment of the joint the cicatrix of the old abscess was torn open and the fibres of the muscles and tendons were more or less ruptured. She was put to bed with a weight and pulley to the leg to retain the elongation if possible, and kept so about four weeks. In a short time subsequent to the reduction pus accumulated in the tissues of the thigh, which necessitated the introduction of a rubber catheter drainage tube two-thirds of the length of the thigh. Soon after the healing of the thigh the knee-joint became swollen; it was opened and two ounces of pus evacuated. She was subsequently discharged with the leg about 1½ inches short. The dislocation in this instance is attributed to meddling midwifery.

Tuberculous Peritonitis.

T. E. Potter, (St. Louis Med. Rev., Oct. 11, 1902), lays stress upon the probability of the peritonitis following upon a long-standing latent infection of various parts of the body, especially the lungs and lymphatic glands. Congestions or impairment of the healthy condition of the peritoneum may lead to the development of the disease. In this connection the writer points to the frequency with which the Fallopian tubes and ovaries are affected by this disease, and offers a possible cause the periodical congestions which take place in the pelvic cavity. Severe constipation he offers as another factor of causation. In diagnosis Da Costa mentions the presence of nodules around the rectum and in the sacro-uterine ligaments as significant points to be noted. In explaining the benefits to be derived from simply allowing the fluid to escape, air to enter, and from immediate suture of the wound, which has been said, but very little definite knowledge is to be had. The freeing of the fluid eliminates the toxins which have been accumulating and which are very poisonous, and therefore great assistance is given to the system in its combat with the disease. In reference to the

entrance of air we know that the tubercle bacilli never attack a large open wound, but are more liable to attack small or contused wounds or those in which stasis is present. Phagocytosis is supposed to play an important part, and the air may so inhibit the germs, at least temporarily, as to allow the leucocytes and tissue cells to get in their work. Morris suggests and claims to have proven by experiment that the entrance of air adds saprophytic bacteria to the peritoneum, and that these tend to hold the specific inflammation in check, at least for a sufficient length of time to allow the nuclein brought by the polynuclear leucocytes to destroy the bacilli and their toxins. Drainage with a rubber tube in the lower angle of the wound is recommended so long as there is any discharge, and irrigation with salt solution is also urged as being beneficial.

Blood Poverty and Gastric Ulcer.

R. N. Willson (Jour. American Medical Association) in an article upon this subject arrives at the following conclusions:

1. In many and perhaps most cases, a grade of anemia precedes the appearance of peptic ulcer, and this anemia usually assumes the chlorotic form.

2. With few exceptions, gastric ulcer is attended by the symptoms of marked anemia. In certain cases in which the blood picture fails to show a reduction in the hemoglobin percentage and in the number of red cells the fact seems to be due to concentration of the blood dependent on anemic cause.

3. General auemia implies anemia also of the pylorus, and consequent inanition of its mucous membrane.

4. The venous outlet from the pylorus is one that in anemic conditions would predispose still further to an unhealthy condition of the muscular and membranous coats of the pyloric wall.

5. Hyperacidity is usually present in chlorosis and often in other forms of anemia; and when present in any condition it is an influence predisposing to gastric ulcer, when associated with an anemic gastric wall.

6. Hyperacidity is not essential to self-digestion of the stomach wall, provided that wall lacks the proper nourishment and stimulation of a healthy or sufficient blood supply.

7. Any form of hemorrhage, menstrual, operative, or anemic, may either predispose to, or accentuate an already present anemic condition of the gastric wall, and such hemorrhages are *de facto* often followed by gastric ulcer.

8. Finally, the foregoing facts, in asso-

ciation with the general one that gastric ulcers are seen almost invariably in anemic subjects, warrant the conclusion that blood poverty is a leading, and the usual, predisposing cause of peptic ulcer.

Treatment of Results of Infantile Spinal Paralysis.

Starr (The Canada Lancet) says that four categories of cases present characteristic indications for treatment. (1) When an entire limb is paralyzed and surgical intervention powerless to relieve, mechanical supports must be employed. The simplest form is the crutch, but it is possible to build up a sort of skeleton artificial limb about the useless member, and if this is done, the patient can get about with the aid of a cane. (2) When the tibiales (anticus and posticus) are paralyzed—which is the rule in these cases—and the foot is thrown into a valgus position by the contraction of the intact peronei, with compensatory shortening of the tendo achilles, these last-named muscles must be tenotomized and the foot restored to its normal position by retention in a plaster of Paris case. A mechanical device in the shape of a boot or brace may then be worn. (3) When the action of the intact muscles may be improved or multiplied by tendon-transplantation, this comparatively new resource should be utilized. Cases belonging under the previous category may receive additional benefit from transplantation. (4) There are certain cases in which mechanical supports are, for one or another reason, contra-indicated. These devices need constant repairing, and the patients may ride at a great distance from the bracermaker. Under such circumstances, the only hope for the patient lies in the effacement of his joints by the artificial production of ankylosis. His leg thus becomes a rigid prop, which may enable him to get about.

Contrasts Between Certain Common Diseases in Children and Adults.

Carr (The Edinburgh Medical Journal. No. 568.)

The "certain common diseases" considered are acute rheumatism, pulmonary tuberculosis, heart disease and digestive disturbances. In the child the joint lesions of acute rheumatism are neither severe nor extensive as a rule; sweating is absent; fever is relatively slight, and there are no symptoms referable to the tongue and urine. Indeed the condition may readily be overlooked. On the other hand, the child is specially prone to cardiac localization. After the age of ten the disease tends more and more to assume the adult type.

Pulmonary consumption in the child often starts in the base of the lung; dis-

semination of the disease through the lungs is rapid and irregular; cavities are not common and both the physical signs and clinical picture of the disease differ in the child. Thus the former are often hardly obtainable, while hemotysis, expectoration, night sweats and tuberculous laryngitis are of very rare occurrence.

In regard to the heart we seldom see myocarditis in childhood, although certain toxemias produce acute dilatation. Mitral lesions occur as a rule in the child and run a peculiar course, causing anemia and wasting. Compensation prevents many of the conditions seen in the adult, and if the age of puberty is survived the patient may live to old age.

Under the head of digestive disorders of children the author cites the sharp attacks of acute dyspepsia—really gastritis—which terminate a period of abuses in diet and represent a sort of crisis. Functional dyspepsia in the child tends to produce wasting, because of the demands of growth. Cough and fever sometimes co-exist and the whole picture suggests phthisis. Owing to the activity of the nervous system, digestive disorders in the child may provoke a great variety of reflexes—night terrors, asthma, etc.

Inflammation of the Diaphragm Complicating Pneumonia.

Rohrer (Maryland Medical Journal, September, 1902) believes that inflammation of the diaphragm is a common complication of pneumonia. In most of those cases in which it is not found, it will be observed that the specimen was obtained from a part of the diaphragm remote from the inflamed lung. Extension of the inflammatory process from the pneumonic lung to the diaphragm takes place in two or three ways: (a) by direct extension; (b) by the lymphatics; (c) by the blood-vascular system.

To inflammation of the diaphragm is due in large part the so-called "pleuritic stitch-pain," also the pain in the abdomen often complained of, especially by children. When the patient lies on the affected side the pain is diminished, because there is less motion of the chest wall and diaphragm in that position. The dyspnea of frequency, always present in pneumonia, is due in large part to the patient's efforts to restrict the movements of the diaphragm.

The inflammation especially involves the muscular substance of the diaphragm, and may be mild or intense, in keeping with the grade and extent of the pneumatic condition. It is of bacterial origin, the usual microorganism being the pneumococcus.

Orchitis and Prostatic Disease.

Desnos (Medical Press, Oct. 8, 1902) publishes an important article on infections of the epididymis and the testicle in patients suffering from disease of the prostate. Orchitis in such cases can be met with in two forms; one, the simple, produces an inflammatory swelling of the epididymis or the testicle; the neighboring cellular tissue is the seat of edema, and the tunica vaginalis of moderate effusion. All these symptoms yield promptly to treatment, but frequently the hydrocele persists, and some induration of the epididymis. The other form is much more grave, as it consists in numerous small abscesses scattered over the region produced by the infection, and if not treated the patients succumb from exhaustion. Under the influence of the infection one of the lobes of the prostate becomes swollen and painful, and frequently abscesses are found.

The treatment depends on the origin of the orchitis. If it appears in the course of general urinary infection, the surgeon is disarmed, and can only attempt to sustain the general condition of the patient and to open the collections of matter as they are found. When the infection reaches the testicle through the vas deferens, a cure may be hoped for; if only one abscess exists a simple incision suffice, but where they are multiplied castration should be performed.

Infections in the Regions of the Liver Following Appendicitis.

Munro (Boston Medical and Surgical Journal) calls attention to a class of complications which are of by no means uncommon occurrence but which we believe are frequently overlooked. He has seen nine cases of lymphatic infections with seven recoveries and eleven cases of thromboses of the portal vein following appendicular inflammation with one recovery. In all these cases the diagnosis was confirmed by operation, necropsy, or both. This is certainly a very creditable showing, for without operation it would have been impossible to have saved even this small number. He believes the degree of lymphatic infection is not dependent upon the extent of the appendicular inflammation, mild chronic appendicitis at times giving rise to a severe lymphangitis. This is in accord with what we know about the thrombosis in other regions and also pneumonia following infections. In persistent fever following operation and without evident cause one of these infections should be counted among the possibilities. Spasm, tenderness and fullness in the region of the quadratus lumborum indicate a possible re-

troperitoneal lymphatic infection, while chills with hepatic tenderness suggest the possibility of thrombosis of the portal vein. In all of these cases of obscure origin the cause of trouble should be sought most carefully by physical examination, careful inquiry into the history, and, if necessary, by an exploratory operation. It is better surgery to explore too early than too late. If infection be found, prompt and thorough drainage of the liver is indicated, together with removal of the inflamed appendix. The prognosis is fairly good in cases of lymphatic infection, but only rarely a case of pyelephlebitis terminates in recovery. However, recovery without operation is out of the question and the patient should certainly be given this small chance. We may hope that in the future inflammations in the region of the appendix will be detected early enough and brought to the surgeon with sufficient promptness so that all complications may be avoided. Until that time arrives a second operation offers the only prospect of relieving many of these serious complications.

The Importance of Milk Analysis in Infant Feeding.

Dr. Wentworth, according to the Boston Medical and Surgical Journal, has made a number of analyses of milk, according to the method recommended by Dr. Charles Harrington in his book on "Hygiene," the writer summarizes his results as follows;

1. The general statement that the upper one-fourth of one quart of cow's milk in which the cream has risen contains 10 per cent. of fat, represents the average of a large number of milks. There is too much variation in milks from different cows to enable one to figure modifications of milk on this basis with any degree of accuracy.

2. The results of the great variation in cow's milks would not be of so much consequence if the percentage of fat in the cream were always low. Too much fat in a modified milk is more likely to cause digestive disturbance than too little.

3. It is advisable, therefore, to have the percentage of fat determined in the cream at least once whenever an infant begins to use modified milk. It is also advisable to have the fat determination repeated at the times of year when the cattle's food is changed.

4. It is not advisable to modify milk with a cream in which the percentage of fat is too low—under 10 per cent.—because if one obtains a sufficient percentage in the modification, the percentage of proteids will be too high in many cases.

5. If the percentage of fat is too low in the upper eight ounces from one quart of

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"set milk," it is better to take fewer ounces off of the top, determine the percentage of fat in these ounces, and use such a number of cream as contains 12 per cent. or more of fat. If more proteid is required, it can be obtained by the addition of lower milk, which is almost free from fat.

6. A safe rule would be to have at least one determination of fat made, no matter how many ounces are taken from the top of the "set milk," and afterward to continue the same number or ounces off each time.

7. In order to make a modification of milk in which a high percentage of fat is combined with a low percentage of proteid it is necessary to use a cream that contains a high percentage of fat. In general it is better to use cream removed from the milk at home than to use cream bought for this purpose, because the latter is much more likely to be stale and to have undergone changes due to heat or age.

8. Within certain limits, accurate percentage modifications of milk are not essential to the well-being of a majority of the babies that are fed on modified milk. Proof of this is afforded by the fact that so many infants do well when fed on modified milk, and yet it has been shown by the results of analysis that these modifications are rarely accurate.

9. The advantage of modifications of milk furnished by establishments is that it is convenient. Three great objections to the use of commercial modifications of milk are: (a) inaccurate modification; (b) stale milks; (c) expense.

10. The technique of fat determination by the Babcock method is simple and easily acquired. The entire outfit, including a centrifugal machine, flasks, pipettes and acid can be purchased for nine dollars. The time required for a fat determination by this method is about fifteen minutes.

The Treatment of Eclampsia.

Judd (Brooklyn Medical Journal, October, 1902) concludes an excellent paper on this subject as follows:

"*Venesection* is one of the most ancient, and still remains one of the most useful methods. It has been opposed on the ground that it promotes the condition which gives rise to the effusions, but, used in properly selected cases, it is of great utility. It should be used in plethoric women and when symptoms of pulmonary edema appear, enough blood should be extracted to lower the pulse tension. Removal of smaller amounts of blood is also of great value in postponing or entirely preventing the appearance of convulsions, as we shall see by review of the researches of Bouchard.

By experiment, he has shown that a bleeding of 32 Gm. removes from the blood as much poison as 280 Gm. of a liquid diarrhea or 100 litres of perspiration.

"*Veratrum Viride*.—This is distinctly the American treatment. A Brooklyn physician, Dr. Fern, in 1871, first called attention to the use of *veratrum viride* in large doses as a substitute for bleeding. It seems peculiar that many of our leading men were so dilatory in adopting so valuable a remedy. During the writer's attendance at medical college '91-'93 at Columbia, McLane was a strong advocate of bleeding, and condemned the use of *veratrum*. At that period, Jewell, of Long Island, was a strong supporter of this remedy and had been since 1880. In 1887 he reported to the Amer. Gyn. Soc. 22 cases treated by this measure alone with a mortality of only 18 per cent. In the writer's experience, *veratrum* is one of our most valuable remedies, but should be given in large enough doses to keep the pulse down to 60 per minute. I have seen convulsions occur in one case on *veratrum* when the pulse was 70 per minute.

"*Morphin*.—The proper use of morphin in eclampsia, that is, in very large doses, was first brought before the notice of the profession in an able and fearless paper by Dr. Clark, of Oswego. Its use in the hands of many has not been productive of good results because the doses administered were not large enough. The proper amount is $\frac{1}{2}$ grain repeated.

"*Chloral*.—This remedy by rectum is a most valuable aid. Doses of 40 60 grains are not too large. Charpentier, who said that premature labor, and still less, abortion, are never to be induced, approved of this remedy above all others. One successful case has been reported where 240 grains were used in six hours; and another, 470 grains in twenty-four hours.

"*Diaphoresis and catharsis* should be used in all cases as a part of the treatment. The hot wet pack by means of a blanket wrung out of hot water is always available. If the patient is unconscious, free catharsis can be obtained by means of croton oil or elaterium. If the patient can swallow, epsom salts is the best remedy for this purpose. Hirst speaks of using 16 ounces in repeated doses in one case before the desired result was produced. The one idea to bear in mind is that whatever remedy is used, push it until you get its physiological effects.

"Nitroglycerin and nitrite of amyl occupy only a minor position in the treatment of eclampsia.

"*Chloroform*.—The status of chloroform in the treatment of this disease is settled.

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"It is claimed by some that the physiological hypertrophy of the thyroid gland during pregnancy acts as a kind of safety valve in the destruction of the toxins developed by the uterine metabolism and we are thus now trying, by clinical experimentation, to demonstrate the utility of the administration of thyroid extract to these cases, at least as a prophylactic."

A Report of Nine Cases in Which Haab's Magnet was Used for the Extraction of Foreign Bodies from the Eye.

Spicer and MacCallen (British Medical Journal) from their experience they draw the following conclusions:

1. When the patient is brought up to the magnet it is the rule for severe pain to be experienced by him if a magnetizable particle is present in the globe. Haab's magnet is therefore of valuable diagnostic service in determining the presence or absence of a magnetizable particle.

2. Localization by the X-ray is extremely important. By their means it is sometimes possible to avoid injury to the clear lens in the extraction of a foreign body, and entanglement of the iris can be avoided if its precise situation is known. Nevertheless, if some delay is unavoidable before the X-rays can be applied, they advise in certain cases extraction of the foreign body by the Haab magnet without precise localization: *e. g.* (1) in which there is considerable inflammation; (2) in which there is a recent traumatic cataract. In each of these cases there is considerable danger in delay.

3. If there is a recent wound the authors attempt to remove the foreign body through it, using Haab's magnet alone. If this wound has firmly healed it is necessary to make an opening for its exit. This may be either corneal, in which case the foreign body is withdrawn by Haab's magnet; or peripheral, in which case they usually em-

ploy the small magnet for the removal of the foreign body from the anterior chamber after it has been drawn forward by Haab's magnet. The latter method is the one generally adopted.

4. In all cases it is most essential that entanglement of the particle in the iris and ciliary body should be avoided. By bringing the patient up to the magnet gradually from a distance, and by increasing the strength of the current slowly, this is to a certain extent guarded against. The idea of this maneuver is to prevent the particle from rushing forward from its posterior position and burying itself in the iris.

Cystitis in Typhoid Fever.

H. E. J. Biss (Ed. Med. Jour., Oct., 1902) mentions two classes of cystitis in typhoid fever—those in which it is directly caused by retention, and perhaps by unclean catheterization, which cases may or may not be specific, and those, on the other hand, which are spontaneous in origin and certainly specific. Concerning frequency, the medium and severe cases seem to suffer most often; the sexes are affected equally, and no differences are noted as to age. The average date of the appearance of bacilluria is the forty-third day; of cystitis, the thirty-sixth. None of the theories which seek to account for a pathological basis are quite convincing, but it seems most likely that a multiplication of the bacilli takes place in the bladder. Sometimes not the typhoid, but the colon and other bacteria, are the cause of the cystitis. Concerning treatment, urotropin should be given as early as possible without waiting to diagnose the bacillus. Of this 20 grains may safely be given every four hours, and the administration should not be stopped too soon. Some forestall the appearance of a cystitis by giving the drug throughout the disease.

Intrapubic Section for Prostatectomy.

Andrews (Boston Medical and Surgical Journal, Oct. 16, 1902) draws the following conclusions: (1) The narrowness of the male pelvic outlet becomes surgically important with the overgrown prostate. (2) Overgrowth of prostate does not cause obstruction unless there is also outside pressure. (3) This may come from the ligaments and muscles without the organ actually pressing upon the ischia, or from bony pressure. (4) Relieving the prostate from the fixed space behind the pubis allows it to expand and cures the obstruction. (5) This can be done best by anterior incision, and should be accompanied by a cutting of the prostatic ring and removing a segment extra-urethrally. (6) Incidentally, the change of position, lowering the bladder outlet, does away with the retre-

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prostatic pouch, and greatly assists natural drainage. (7) The separation of the prostatic and urethral ligaments from the pubis, and the weakening of the urogenital diaphragm, is not to be avoided, but sought.

The Indications in Uterine Cancer.

Conant (American Journal of Gynecology and Surgery, October, 1902) says that cancer of the uterus is generally met in one of two forms; the squamous-cell carcinoma (usually found in the cervix) and the adenocarcinoma (most commonly seen in the body). The prognosis is most favorable in the latter, and least favorable in adenocarcinoma of the cervix. In looking over a mass of statistics, one is somewhat appalled by the fact that the percentage of permanent cures is so small. But if one looks over a series of cases and picks out adenocarcinoma of the body (malignant adenoma), he will be surprised to see how large a percentage of cures there are after three years. It seems, therefore, that in the most favorable form of malignant disease, and also in the squamous-cell variety when confined to the cervix, if the diagnosis is made early, we may expect a large percentage of cures. He concludes that in all cases of cancer which are seen early, either of the cervix or the fundus, where nothing can be felt outside of the uterus, a radical operation should be performed.

Foreign Body in the Nasopharynx.

R. Blake (The London Lancet, Sept. 20, 1902), reports a case which may be of service in general. The patient, a married woman, forty-eight years old, was sent to him for an opinion as to involvement of the accessory nasal sinus. The peculiar history was as follows: For some years the patient had drawn from the nose every morning either matter or matter with hard, offensive crusts. At times these were, according to her description, covered with mildew. The total duration of the trouble was, perhaps, 14 years. The so-called matter was probably mucous. On examining the patient there was obviously a dry rhinitis sicca et atrophic and a naso pharyngeal occlusion. Both could be distantly seen, covered with a crust of congealed mucus, blackish in color. The nasopharynx was so irritable that it was impossible to get any view from behind. About eight months after the first examination the patient again appeared, stating that she had a feeling of burning in the tongue, but it was still impossible to look at the nasopharynx. The doctor then ordered the use of peroxide of hydrogen, 10 volumes, to the vault of the nasopharynx, by means of a postnasal syringe. Three days later a large fragment of the wing of a seed-vessel of an ash or sycamore tree was

removed by the patient. It is impossible to do more than generalize as to whether the inflammatory condition of the nasopharynx was the result of its presence or whether the patient had suffered from some such condition before, which had permitted the entrance and retention of the foreign body. After removal of this fragment the patient's condition greatly improved.

Puerperal Eclampsia.

Nicholson, in the British Medical Journal, Oct. 11, 1902, states his conception of puerperal eclampsia as follows: In pregnant women, for reasons at present unknown, the supply of iodothyron in the tissues becomes gradually or suddenly, insufficient for the needs of normal metabolism. With this, certain toxic substances (intermediate or imperfectly converted products of nitrogenous metabolism), find their way into the circulation. These toxins, by their special property of contracting the blood vessels, eventually lead to the arrest of the renal secretion. With the suppression of urine, convulsions occur, not apparently different from those of ordinary uremia. A lack of iodothyron is the primary fault; then the functions of the important metabolic organs are deranged, and the vicious circle becomes established. The indications for treatment are the use of thyroid extract and re-establishing the secretion of the urine. He notices some observations on the pulse, namely, that in women who suddenly become eclamptic, the character of the pulse becomes markedly altered; the sphygmographic features are those of increased blood pressure. The pronounced and permanent rise in the blood pressure. The pronounced and permanent rise in the blood pressure increases still before the onset of the convulsions. When the eclamptic symptoms are fully developed the radial arteries are contracted and their caliber is diminished. Thyroid extract possesses the specific action of enlarging the caliber of vessels, and he explains the good effects of morphin by the fact that the large hypodermic dose dilates the vessels. The author says thyroid extract may be used by the hypodermic method or by the mouth in all cases of eclampsia, but when convulsions are severe at least one large dose of morphin should be given. Saline infusions may be used to increase diuresis, and when there is a rapidly rising temperature or certain death by coma, the additional treatment by the cold or tepid bath, recommended by Herman, seems to offer the best prospects. In the comatose type one would not use morphin. In conclusion, he suggests that thyroid extract should be tried in some of the rare cases of suppression of urine occurring after labor and miscarriage.

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**A true exact solution of
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White Pine Bark.....
Balsam Tolu.....
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**Permanent and unalterable
through age.**

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Adult dose—one teaspoonful.

The quantity ordinarily ordered by the physician is two, three or four ounces.

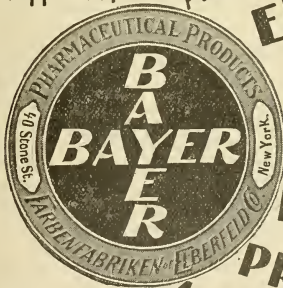
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The Best Salicylate.

Bronchopneumonia in Children.**Appendicitis.**

John L. Stevens, in the London Lancet, September 20, 1902, makes a few statements as follows: Not the least important point in the treatment is the prophylaxis. It is to be remembered that every common cold or bronchial catarrh or gastro-intestinal disorder in a young infant may pass into this exceedingly serious and fatal disease. It is obvious then that everything should be done to prevent such an occurrence. No indisposition of the kind indicated in an infant should be regarded lightly, and the child should be carefully treated and not lost sight of till all symptoms of these initial disorders have passed away. In particular the mother should be warned of the danger of exposing the child to cold, and of the necessity of keeping it warmly but not heavily or tightly clad; and gastro-intestinal derangements should be carefully corrected by directions as to diet. In the presence of the acute disorder itself the most important point to bear in mind is the fact that we are dealing with an acute generalized, inflammatory disease of the respiratory apparatus, the immediate tendency of which is to produce great exhaustion of the vital powers. The disease is essentially one of debility, and treatment should aim at maintaining nutrition and stimulating the failing heart. All measures tending to depress the child should be strictly avoided, and for this reason emetics are to be used. Place the child in an airy, well-warmed room. If it can be easily arranged, let the air near his bed be moistened by the steam from a bronchitis-kettle. This will often have a marked effect in soothing the cough. Do not load the child with clothes, but keep him warm, and avoid compression of the chest and abdomen by flannel binders. Two or three linseed poultices in the course of 24 hours, applied back and front, and not too hot, are often of service as mild counter irritants. Feed the child with milk diluted or peptonized, and check diarrhea with subnitrate of bismuth, combined if necessary with one or two grains of Dover's powder. Alcoholic stimulants are almost always necessary, but they should be strictly supervised by the medical practitioner, ordered by him as occasion demands, and prescribed as Sturges recommends—in minims, not in drams. A mixture containing from half a grain to a grain of carbonate of ammonia and two minims of tincture of digitalis in each dose, made up with syrup, may be given every three or four hours. The child should be constantly watched by a competent nurse, and should be occasionally held up to relieve breathing.

J. Burnet (The London Lancet, Oct. 4, 1902) closes a valuable paper with the following summary: After ail has been said, there still remains the difficult question to answer. When are we in duty bound to call on a surgeon? It is impossible to be dogmatic. For his own part, he thinks a surgeon should only be called in, when, in spite of the careful carrying out of medical treatment, the patient's condition is evidently becoming worse. In dealing with appendicitis one is apt to expect too much in the way of improvement from day to day. During the satisfactory progress of many of these cases, the improvement is sometimes hardly perceptible but if it is observed after a careful estimation of every factor involved one is warranted in persevering with medical treatment rather than in summoning a surgeon. He has no hesitation in saying that many cases of appendicitis are operated on that would have made a good and even speedy recovery under medical treatment pure and simple. Surgeons urge that there is less risk in operating while the patient's strength has not yet been exhausted than in letting the disease run its course. This is to a certain extent true, but one can do a great deal to carry the patient through his illness, and to prevent complications setting in by careful attention and intelligent medical supervision. Treatment during convalescence, too, is of great importance. When the temperature and pulse have remained normal for about a week the patient may be gently lifted on to a couch for a few hours each day. At the end of a month or six weeks, he should be sent to some bracing but quiet country place. During this period the greatest care in dieting is necessary, as it also the avoidance of constipation. Nothing that is in the least likely to upset the digestive organs should be taken, and the bowels must be made to act once a day. The convalescent should be warmly clad, woolen underclothing being most essential. He must be careful to guard against chills, and he should always be indoors before sunset. Some people, even though they have been warned, are very heedless in regard to these matters, and so one should always make a point of impressing on them the utmost need for careful attention to the advice given them. In conclusion, if medical treatment is to succeed in any particular case, it must be undertaken with more than ordinary care and watchfulness. Only in such circumstances will it be found to be of value.

ADVERTISEMENTS.

Action of Iodipin on the Vascular System.

The influence of iodine on absorption and its specific action on the vascular system have been frequently discussed. Iodine causes a dilatation of the peripheral vessels. The utility of the drug is unfortunately hampered by numerous injurious collateral effects. This drawback often compels us to avoid iodine even in the face of urgent indications. Recently, iodipin (iodized sesame oil) has been shown to be a most efficient substitute for iodine, equally potent and free from toxicity. Dr. Richard Thausig¹ has inaugurated clinical experiments with iodipin, selecting affections which make a vascular drug-action desirable, such as asthma, arteriosclerosis, syphilitic endarteritis and chronic lead-poisoning.

The remedy was administered internally and hypodermically. The oily taste often interferes with inhibition by the mouth, and, when large doses are taken, some manifestations of iodism are apt to occur, probably as a result of rapid absorption. This absorption takes place in the small intestines, where iodipin is split into its components, iodine and sesame oil. Iodipin may be given per rectum, but the absorption is very slow and the therapeutic action often inadequate.

By far the best route is the hypodermic. For this purpose the 25 per-cent. preparation is employed. Injected with aseptic precautions, the drug produces no local reaction of any significance. The usual single dose in the author's cases was 5 drams on the average, one injection being made every fourth day. The therapeutic results were similar to those obtained by giving the alkaline iodides. Toxic manifestations were occasionally noticed, but they were mild and followed very large doses.

A most agreeable feature of the new drug is its influence on the nutrition. Many patients gain in weight while taking iodipin. This may be due to its fatty component, and contrasts favorably with the usual cachectic consequences of prolonged iodide medication.

The author finally emphasizes the beneficial action of iodipin in lead-intoxication. Probably this effect is due to the influence on the abdominal vascular system.

Iodipin, concludes the author, possesses considerable value, since it enables us to supply iodine to the diseased tissues for a long time, without provoking a specific intoxication.

The Value of Thiocol.

The beneficent influence of creosote and its derivatives on pulmonary tuberculosis is no longer subject to serious doubt, according to Dr. S. Drago and Dr. A. Coco.¹ The chief drawbacks of creosote are the difficulty of tolerating it in the digestive tract and its penetrating odor. The desideratum has therefore been to find a substitute free from untoward effects, and among the numerous products recommended as successors to creosote, thiocol deserves the first place.

Thiocol (guaicol-sulphonate of potassium), a derivative of guaicol, is a white, crystalline, odorless, slightly bitter powder, easily soluble in water.

Sirolin is a 10-per-cent. syrup of thiocol, having a pleasant taste and being free from toxic or caustic properties. A series of clinical experiments with thiocol and sirolin has testified to their value in pulmonary tuberculosis. The great advantage of these preparations is their perfect non-toxicity, which makes high dosage possible. In the case of creosote, correspondingly large doses are contra-indicated by the inevitable rebellion of the digestive organs.

All symptoms of tuberculosis are favorably influenced by thiocol; the cough relieved, night-sweats and fever diminished, expectoration facilitated. The sputum under thiocol treatment shows a notable reduction in the number of bacilli.

The daily amount of thiocol administered was from 16 grn. up to 1 dram and more; sirolin was given in teaspoonful doses four to six times daily. The duration of treatment has been one to three months, and the final result in a series of twelve cases showed seven completely cured and four improved patients. The cures were verified by inoculating guinea-pigs with the sputum.

The results may be summarized as follows: The experimental researches confirm and explain the clinical observations on thiocol. The drug influences favorably the blood-composition, and enables it to fight the enemy. Not only does the plasma show an increase of albuminous constituents, but the quantities of serum-globulin and serum-albumin are so altered that the latter is relatively increased. This fact possesses great therapeutic interest, as it has been proven that a diminution of serum-albumin accompanies many diseases which led to destruction of red blood-corpuscles. Moreover, thiocol has a considerable germicidal potency. It also brings about an increase in the number of erythrocytes and in the quantity of hemoglobin. The alkalinity of

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Shocks the patient. Depletes the lung by reduction of vital tissue. Every red blood-corpuscle is an oxygen carrier. Pneumonia patients bear loss of blood badly. Bleeding necessitates administration of free oxygen.

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Antiphlogistine is the only known and approved medium for Physiological Phlebotomy. Relieves the congested lung through the physical process of osmosis. Aids resolution by abstraction of Liquor Sanguinis. Maintains circulation by saving vital tissue.

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Is immediate, effective and permanent in its action. Pleuritic adhesions do not occur and Cardiac complications are prevented in those cases where

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the blood is also increased. This accounts for the germicidal value of thiocol, since alkalinity and anti-bacterial action are directly correlated. Finally, an intensified phagocytosis takes place, evidently by an increase of leucocytes as compared with polynuclear white corpuscles.

Formin as an Intestinal Antiseptic.

Dr. Loebisch¹ considers formin (hexamethylene-tetramine) an excellent intestinal disinfectant. The urine of a man who was taking 7.5 to 15 Gm. (2 to 4 dr.) daily for a posterior urethritis contained no indican. The degree of intestinal putrefaction present in any patient can be determined from the definite relations that exist between the sulphates preformed and the fixed ether-sulphuric acids excreted in the urine. Indican is a derivative of indole (benzopyrrole), which, like skatol (methylinole), is a product of the bacterial decomposition of tyrosine. The sulphuric ethers or, better, the ether sulphates, have their origin in toxic products arising from bacterial decomposition of the aromatic radicles of albumins—such as paracresol, phenol, indole, skatol, indoxyl, and skatoxyl. A large number of experiments made by the author and his assistant tend to prove that with a normal diet, the indoxylsulphuric acids excreted with the urine are considerably diminished and even suppressed when 2 Gm. (30 grn.) of formin are taken daily. Dr. L. finds that this drug is superior as an intestinal disinfectant to the substances ordinarily employed (cresol, carbolic acid, naphthol, thymol, etc.) He further states that it has the advantage of being non-toxic, and that being soluble in water it is preferable to salol and to the more recent intestinal antiseptics such as resalol and aspirin.

Clinical Experience with Dionin.

EDITOR MERCK'S ARCHIVES:

In the few cases in which I made use of dionin, the results were perfectly satisfactory and in full accordance with claims made for it by many investigators. In case of mild *morphinomania* was able to substitute dionin, which effectually relieved pain in legs. The case was not an extreme one, but had it been, I am confident that dionin in sufficient quantity would have acted just as well. In other cases of abdominal and pelvic pain, of to me somewhat obscure origin, the dionin seemed to answer the purpose in stopping the pain just as well as morphine would; gave $\frac{1}{2}$ grn. where I would have administered $\frac{1}{8}$ grn. of morphine, and there were no after-effects what-

ever. In *cough* of case of phthisis where codeine had been used for several months, the dionin was used and served to control the cough in even less dose and daily quantity than the codeine.

I shall continue the use of dionin; especially in cases of morphine habit I feel that I have a most valuable aid in treatment and cure of same.

A. P. ROWLEY, M. D.

Denver, Colo.

Airol in the Treatment of Recent Wounds.

Prof. N. Senn¹ contributes an interesting special article on Prof. Nicoladini's clinic at Gratz, Austria. Chloroform and the A. C. E. mixture are used as anesthetics. Silk has almost entirely taken the place of catgut, and gloves have been abandoned. Hand disinfection consists of thorough scrubbing with water and marble soap, followed by alcohol and sublimate solution. Recent wounds, when no drainage is required, are covered with Bruns' airol paste, which consists of the following:

Airol.....	} equal parts
Bolus Alba (Kaolin).....	
Glycerin.....	

If the paste is too stiff, a little more glycerine is added; if too thin, more kaolin. The yellow paste becomes firm in a short time, and is easily washed away with warm water. It is claimed that this paste is a means of preventing stitch abscesses.*

New Treatment of Epilepsy.

EDITOR MERCK'S ARCHIVES:

I wish to submit the following report on two cases treated at the Massachusetts Hospital for Epileptics:

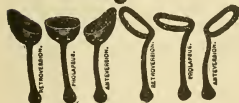
The two patients were put on bromipin; the one on June 16, the other on June 17, 1902. Each was given a dram of the remedy three times a day.

Patient A was a young man seventeen years old, who had epilepsy for four years. No heredity; family history good. Previous to his taking bromipin he was having on an average of two or three seizures a day. After he had taken bromipin for a few days, the seizures decreased in number, and since then up to the present time, September 20, 1902, he has had ten severe and eleven mild seizures. The gastric, mental and skin disturbances so common after the use of bromides were not observed

* Another formula of Bruns' paste reads as follows:—Airol, Mucilage Acacia, and Glycerin, of each 1 part; Kaolin, 2 parts or enough to make a soft paste.

¹ American Medicine, IV, No. 15.

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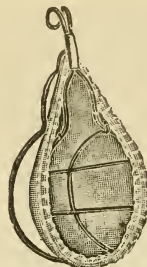
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of Cypridol do not salivate or produce dyspepsia and the emaciation which is inevitable with other mercurials. 1/32nd grain in each capsule.

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IN
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in the case, even after a prolonged use of bromipin.

Patient B, a young man nineteen years old. No heredity; family history good. He was admitted to the hospital June 17, 1902. His people said that he had been having a great many convulsions of late, as many as four or five in the course of twenty-four hours. He was placed on bromipin, and in a short time his seizures lessened both in numbers and severity; and at the present time, September 20, 1902, he has on an average of one or two seizures a week. None of the usual ill effects of the bromides were noted in this case.

We also find bromipin of great service in status epilepticus. Here it is our custom to give it hypodermically, in 6 Cc. ($1\frac{1}{2}$ dr.) doses, and repeat it every hour if it does not control the convulsions immediately.

We think bromipin possesses all the medicinal properties of the bromides without their well-known disadvantages, and with the additional advantage that it can be given hypodermically with perfect safety.

EVERETT FLOOD, M.D.

Palmer, Mass. Supt. M. H. for E.

Tic Douloureux.

L. W., white, age 53, a citizen of Atlanta and a merchant, had been affected with facial neuralgia, a typical tic, off and on, for the past three years. He had nearly his entire upper teeth removed, hoping to secure relief, but in every instance failed. He resorted to a change of climate and a different mode of life, in despair. He was given innumerable anodyne preparations, which only relieved him while under their narcotic effect. His physician tried massage and electricity with no better result. When I first saw him he appeared a physical and mental wreck. He sat ill at ease, and looked haggard and in a state of continual fear. I was fortunate enough to see the patient have several attacks. He would jump as if startled and as if some hidden force had moved him, look steadily in one direction for a moment, and appear almost to lose consciousness. His eye would twitch and snap with convulsive efforts, while his frame appeared cold and clammy, pulse being weak and indifferent all the while. Atropine and iodide of potash proved the rule of former drugs. An operation for resection of the nerve was advised, but this naturally was not taken to at once, but the man's suffering becoming so great and his general health getting in the decadency so rapidly, he felt it was the only recourse. Just at this juncture, five grain tablets of protonuclein was tried, one tablet being given every two hours. After a trial of

two days the man's appearance was that of a different person. His tic was gone. He appeared buoyant and full of hope, and his heart was full of gratitude. This was six months ago. The protonuclein was continued two weeks, and the man is now in a perfect state of health, without a sign or symptom of his former trouble.

Sanitätsrath Dr. C. S. Sewening, of Werther (Westphalia), states (Deutsche Aerztezeitung, Berlin, October 1, 1902) that the recent numerous communications regarding the employment of creosotal in pneumonia incite him to publish the good results which he has obtained from the drug in some other affections. Amongst others he recounts a case of catarrhal cystitis occurring in a surveyor who had worked for several years in a wet coal mine, and whose urine formed a thick, mucilaginous deposit in the chamber. He was ordered:

R. Creosotal 4 grams (1 dram)
Ol. oliv. 200 grams (6 $\frac{3}{4}$ ozs.)

After he had taken this mixture two to three times a day in tablespoon doses for eight days, his urine became permanently clear.

Another case was that of a young farmer, who came to him about a year ago complaining of a dirty discoloration of the face, hands, etc., being, in fact, a good picture of Addison's disease. Sewening prescribed for him:

R. Creosotal 4 grams (1 dram)
Ol. jecor. 200 grams (6 $\frac{3}{4}$ ozs.)

directing him to take a tablespoonful of the mixture three times daily. After he had taken the medicine twice the spots disappeared, and they have not returned to this day. The man's general condition, also, is perfectly normal.

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It is in the chronically congested state of the bronchial, tracheal and pulmonary mucous membranes attended by hypersecretion of mucus, that Angier's Petroleum Emulsion is of special value. The expectoration becomes more free, the pulmonic congestion is relieved, the respiration is easier, the troublesome cough is checked. The sputum is altered, it becomes less viscid, more freely expectorated and loses its fetid and purulent character. The sensation of dryness and irritation in the throat and chest is relieved. Angier's Petroleum Emulsion is a natural sedative lubricant, which adds vigor and tone to the system.



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DOSE: Teaspoonful every half hour until nervousness is abated, then four times a day.
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A Respiratory Antispasmodic Sedative and Expectorant

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Glycerine, making it a very agreeable and palatable preparation; being tolerated by the most sensitive stomach.

DOSE: Teaspoonful every two or three hours.

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ABSOLUTELY and
INCONTROVERTIBLY

the best RESPIRATORY SEDATIVE
ever offered to the PROFESSION.

It DOES control the cough.
It DOES relieve the congestion of the passage; and
It DOES make expectoration easy.

Being a remedy of proved value it rests upon its own merits.

PUT IT TO THE TEST.

Prescribe TERP-HEROIN (FOSTER'S) in Original 250 c. c. (8 oz.) bottles to avoid substitution.

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Weight Losing

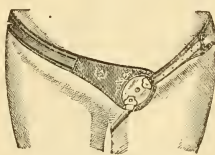
Consumptives will gain weight on Hydroleine where they lose weight on plain cod-liver oil. The plain oil will cause diarrhœa, oily eructations, or pass through unchanged; while Hydroleine will be eagerly taken up by the lacteals, and produce a steady gain in weight, and a marked improvement in the general health. Hydroleine aids and restores the functional activity of the pancreas and rapidly develops an appetite.

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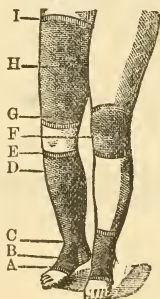
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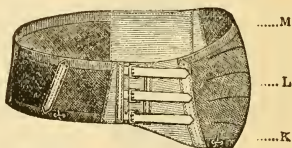
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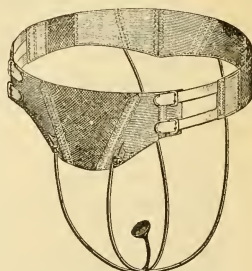
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Investigation of the Action of Sublamine (Ethylene-diamine-Sulphate of Mercury) as a Disinfectant.*

Dr. M. Blumberg describes in detail the experiments reported at last year's Surgical Congress in Berlin, and announces the results obtained from practical applications of Sublamine.

He calls attention to the importance of selecting the mercurial salt having the greatest power of tissue penetration, which, as his experiments have demonstrated, is Sublamine. Furthermore, corrosive sublimate frequently causes exzemas of the skin; and exact experimentation has shown that the very slightest roughness, the most insignificant scaling of the skin, make an efficient redisinfection more and more difficult. As Schleich, Gottstein, Hægler and others have insisted, a good condition of the hands is the first desideratum for efficient sterilization; and Sublamine, even in very concentrated solutions, in which sublimate cannot be employed at all, does not attack the skin.

Sublamine has been used by Prof.

Kroenig in his extensive operative work, in all his laparotomies and other operations, for the disinfection of the hands and skin, and the constant employment of Sublamine left the operator's hands in irreproachable condition. Prof. Kroenig authorized him to publish the following statement: "Prof. Kroenig uses Sublamine in his clinic for the disinfection of the operator's hands and the patient's skin in strengths of from 1:1000 to 1:500. Whenever the hands have been in contact with suspicious material, the concentration is increased to from 1:300 to 1:200; and no irritation of the hands has ever occurred. Besides this, the silk employed for sutures is boiled in a watery 1:300 Sublamine solution, as in the Kocher method."

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* Abstracted from the Muenchener Medizinische Wochenschrift, September 16, 1902.

**Preliminary Note Upon Employment of an
Anti-Streptococcus Serum in Severe
Cases of Scarlet Fever.***

[From the J. H. R. Molson Pathological Laboratory, McGill University.]

In the number of the British Medical Journal for October 4th, just to hand, there appears (p. 1086) a paragraph upon a communication by Dr. Paul Moser, of Vienna, to the meeting of the German Naturforscherversammlung held recently at Carlsbad, dealing with the result, which, in his hands, have followed the employment of an anti-streptococcus serum in the cure of scarlet fever.

His serum, it would appear, had been produced in the Sero-therapeutic Institute of the Rudolph Hospital under the superintendence of Dr. Paltauf, Professor of Pathology in the University of Vienna, by injecting horses with the products of cultures of streptococci obtained from the blood of scarlatinal patients. The streptococci had been isolated by him from the blood of 63 out of 99 children who had succumbed to the disease. The "serum has been used clinically since November, 1901, in about 84 cases, with the result, that the mortality among 400 cases of the disease in the St. Anne's Hospital has been reduced one-half. Only the more severe cases in the hospital were treated with the serum on account of the difficulty in obtaining a sufficient supply. All of the children, who were treated within three days of infection, recovered; their condition underwent a striking and rapid improvement, and the pyrexia in many cases greatly abated. So far the serum has not been produced in a concentrated form, so that a comparatively large quantity has been injected into each patient. In some cases erythematous eruptions developed, but they soon disappeared. Prof. Paltauf and Prof. Escherich, Director of St. Anne's Children's Hospital, testify to the good results obtained with it, both in the cases of children and adults." The paragraph proceeds to state that the Austrian Government is about to devote a considerable sum to the purpose of preparing the serum in large quantities for distribution to all the hospitals.

Unknowningly I have, for now close upon two years—to be exact, since Jan. 26th, 1901—been engaged upon a similar series of studies upon the cases of scarlet fever admitted to the Montreal Hospital for infectious diseases, and upon the treatment

of the same. The results obtained by me follow closely upon those detailed in the paragraph I have just read; in fact, they seem more remarkable. So striking have they been, that I have felt that I dared not publish on the subject until I had accumulated a larger number of cases and could place myself in a position beyond any reasonable doubt. My intention had been to wait until I could report upon at least thirty, preferably fifty, cases that had undergone the particular treatment, the number depending upon whether the epidemic of last year continued through to this autumn and winter. The singular harmony between the results here in Montreal and those recorded from Vienna, absolve me, I think you will agree, from the necessity of waiting any longer. I only add that I make the matter public at this juncture, not with any intention of claiming priority, for obviously Prof. Moser and his fellow-workers already possess such priority in publication—and that is the only priority which is permitted to stand nowadays—as also in the use of a successful serum, but to let it be known that here in Montreal and on this continent, similar studies and clinical observations, conducted independently, have led to similar results. And more particularly, I desire to engage your interest in the matter and your aid in obtaining more cases for the employment of this method of treatment, to the end that it may be placed upon an absolutely secure basis.

During the time in which I have been engaged upon this work 117 cases of scarlet fever have been studied bacteriologically. Cultures have been taken from the tonsils and pharynx in all these cases, and streptococci have been found in 65, or 55.5 per cent. of those examined. From 25 of the most severe cases cultures have been taken from the blood during life, relatively large quantities of both being employed for the purpose. In these I found streptococci invariably present when the blood had been obtained during the first five days of the disease. I also succeeded always in obtaining cultures of streptococci from the pus from suppurating cervical glands and in the discharge from the ear in cases of otitis media. The urine also, in suitable cases, contained streptococci, particularly if the patient had marked albuminuria at the time of examination. Courtois has found streptococci in the urine of 91 per cent. of the cases of scarlet fever examined by him while the patient was suffering from an attack of albuminuria, and in 27 per cent. of those without albuminuria. Many other workers have, from time to time, noted the frequency with which the streptococci are to be found in scarlatinal anginae, more

* Read before the Montreal Medico-Chirurgical Society, October 17th, 1902, by Dr. G. A. Charlton, of Montreal, Fellow in Pathology, McGill University; late Resident Physician, Montreal Civic Hospital for Contagious Diseases.

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Believing that the National Capital presents many special advantages for post-graduate medical instruction, the leading members of the profession in Washington City have organized a Post-Graduate Medical School. The course of instruction will consist principally of clinics at the different hospitals of the City and of practical laboratory work. One or two didactic lectures will also be given daily upon such branches as Preventive Medicine, Military Medicine and Surgery, Preventive Inoculations, Serum Therapy, etc.

General Geo. M. Sternberg, U. S. A., has been elected President of the Faculty and the Surgeon Generals of the Army, Navy, Public Health and Marine Hospital are members of the Executive Committee.

It is believed that the course of instructions will be especially valuable for physicians who contemplate entering one of the branches of the public service, also for the general practitioner and for those who intend to practice surgery, gynecology, ophthalmology or laryngology as a specialty. The special attention given to Preventive Medicine and to laboratory work in Bacteriology and Sanitary Chemistry will afford public health officers unusual advantages for perfecting themselves in the scientific studies which must serve as a foundation for their practical work.

The first session of the School will commence on Monday, January 12, 1903. Circulars containing full information will be sent upon application to the President of the Faculty,

GENERAL GEO. M. STERNBERG, U. S. Army.

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especially, I might here mention, Kurth, Seitz, Booker, Pearce and Dowson, all of whom have written lengthy reports giving the results of their investigations.

I would here note that for some months I was considerably interested in endeavoring to confirm the work done by Class of Chicago upon an organism which he has termed *Diplococcus Scarletinae*. There is no doubt that an organism corresponding with that described by him can be isolated from cases of scarlet fever, especially when his methods are followed, but was unable to satisfy myself that it had anything to do with the causation of the disease. However, I must add that the streptococcus also does not appear to be the essential agent in the disease as has been claimed by D'Epine and others. In the mild, uncomplicated cases streptococci were not found. These cases gave no trouble and, after the first week or more, required little more than detention in quarantine. My bacteriological studies, carried on at the time when I was also observing the cases clinically, bred in me the conviction that the streptococcus leads to a secondary infection, and that this secondary streptococcal infection is the cause of most, if not all, of the unfavorable complications of the disease. The severity of the attack appears to be due to the concurrent, or, as Rogers employs the term, symbiotic action of this micro-organism and the causative agent of scarlet fever upon the susceptible individual, much as it has been noted that streptococcus infection renders diphtheria, more severe, though the ill-effects of this symbiosis in scarlet fever appear to be still more marked.

The administration of anti-streptococcus serum was therefore indicated, to counteract the effects of the toxins of the streptococcus and to bring about the destruction of that organism. For it appeared that if this could be accomplished, the cases would resolve into a less severe type and the prognosis would become more favorable.

The various anti-streptococcus sera, have from time to time, been tried in these cases by Baginsky and others, including myself, but with little or no result. Within the last few months, however, I have had submitted to me, and have been given the opportunity to test, an anti-streptococcic serum, produced in the biologic department of the firm of F. Stearns & Co., of Detroit and Windsor, under the direction of Dr. Hubbert, head of that department. Full information has been given to me regarding the mode of production of that serum, and I have myself tested and tried the streptococcus employed in the process of production. It is but fitting that Dr. Hubbert

should himself announce the methods by which he has obtained this serum. All that is necessary for me to state is that it is produced along the lines of other sera, a special process being employed, and that in my hands it has proved itself remarkably effective. Nor shall I pretend to explain why one anti-streptococcic serum is more active than another in this particular class of streptococcus infections, nor discuss whether we here have to deal with a distinct species of streptococcus, or with a strain modified by growth in association with the causative agent of this particular disease.

So far, since the 24th of June last, I have employed it in the treatment of 15 cases. These cases were all severe, and the majority of them, I have no hesitation in saying, under ordinary treatment, would, if they had not terminated fatally, at least have suffered from lingering and troublesome complications. As it was, there were 13 prompt recoveries, almost free from complication. Not one of the 13 has suffered from albuminuria nor from suppurative otitis media. In all, upon admission to the hospital, there was involvement of the cervical glands, but in only two instances did this go on to suppuration; the usual termination was by resolution within 48 hours after the injection of the serum. Another interesting feature of these cases was the rapidity with which desquamation proceeded. It was usually completed by the thirty-second day of the disease, and thus it frequently happened that a severe case was discharged before a milder one which had been admitted at the same time, but had not been treated by the serum.

Two deaths have occurred in this group of fifteen cases. One of these patients was in a dying condition when admitted to the hospital, and lived only four hours. The other, upon admission, was suffering from a severe pneumonia, and though improving somewhat, succumbed five days later to an attack of laryngeal diphtheria.

The quantity of serum injected has been moderate. My usual dose has been 20 c.cm, but in those cases which from the severity of the attack seemed to require a larger quantity, this dose has been repeated. In this respect the serum appears to be more active than that employed by Professor Moser. The effect was usually prompt: the temperature began to fall within two hours after giving the injection, and became normal in from two to four days. There has been no other treatment in these cases except stimulation during the first three or four days, with the usual precautions as to laxative, diet, and rest. And lastly, no adverse symptoms, either local or

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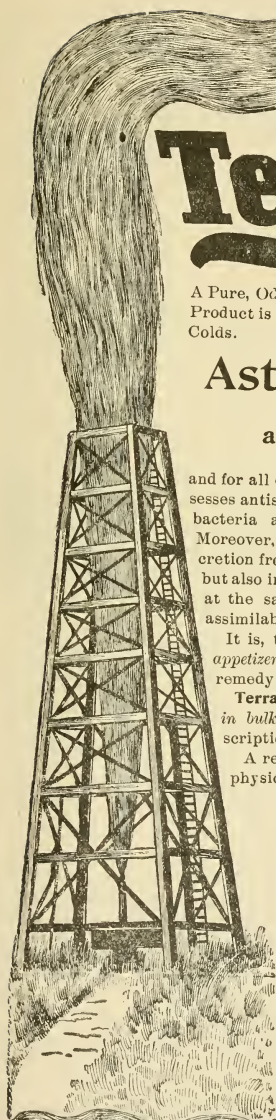
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general, have so far arisen from the use of this anti-streptococcic serum.

It does not, I hold, cure scarlet fever, but its timely administration in the severe cases, tends to allay unfavorable symptoms, overcomes complications and, given at an early stage of the disease, it prevents a fatal termination.

Thus, to sum up, the results seen by me to follow the injection of this anti-streptococcic serum in severe cases of scarlet fever have been:

1. Rapid subsidence of the pyrexia.
2. An accompanying decrease in pulse-rate with improvement in tension and rhythm.
3. Prevention, or, at least, marked amelioration of such complications as cervical adenitis, otitis media, and albuminuria.
4. Rapid and favorable convalescence in the majority of cases.

I am not prepared to lay the most stress upon the reduction in mortality. It is true that from my clinical experience of the scarlet fever cases in Montreal during the last two years, individually I should have expected a fatal termination in the majority of the cases treated with this serum, so severe did they seem to be. But the intensity of scarlet fever notoriously varies, and again, despite the most earnest desire to preserve an evenly balanced mind, when greatly interested in a subject I recognize that this is most difficult. The physicians who sent these cases into the hospital are possibly more fitted to express an opinion. What I would emphasize is the most remarkable and rapid subsidence of serious symptoms which, in case after case, followed the employment of the serum. I have never previously seen the disease pass suddenly from a severe, not to say alarming, to a relatively mild condition.

I hope later to publish the results of the observations in fuller detail; in the meantime, I feel that this is a matter of such promise and high import that I beg the co-operation of those here present in affording opportunities for confirming the results which I have just placed before this society.

Statistical Report on Creosote and Creosotal in Pneumonia.*

Last March Dr. Van Zandt sent out a number of circulars to many medical journals and to a few individuals, asking the following questions of those who had used creosote or carbonate of creosote (creosotal) in the treatment of pneumonia: 1. Do you believe creosote ever aborts pneumonia?

2. Do you believe the majority of cases are mitigated by it? 3. Have you ever found cases which, having plenty of time, were entirely uninfluenced by it?

In response he had over 70 letters and cards and five verbal statements, a large proportion of which he tabulated. To the first question 37 physicians, reporting 762 cases, said "Yes"; 15, reporting 187, said "No"; and 19, reporting 177, failed to answer. Therefore, of those reporting, a little over two-thirds admitted the abortive effects of creosote. To the second question, 57, reporting 1,022 cases, answered "Yes"; 2, reporting 10 cases, said "No"; and the remainder failed to answer. To the third, 23 said "Yes"; 31 "No"; and 16 failed to answer.

Of 1,130 cases reported, 56 were fatal, 24 of them being accounted for as follows: 12 were complicated, 9 others were over the age of 67 (in some instances complicated), 3 were alcoholic (of which two were complicated), 1 was far advanced when treatment was begun, and 1 used "creosote products." The mortality in this series is a little over 5%; and, as the recognized death rate is 25%, the author claims that the treatment saved 226 lives.

Van Zandt refers particularly to Prof. W. H. Thomson's report of cases treated with carbonate of creosote in the Roosevelt Hospital. The loss here was 1 in 18, or about 5.5%. A condensed report for five years from this institution gives an average death rate of 35.6%.

These figures confirm the conclusions of his former articles, that a large per cent. of pneumonia is cut short or aborted; almost all the rest mitigated, and the remainder or a very small per cent. not affected by the remedy. He thinks the use of creosote carbonate or creosote in the treatment of pulmonary affections is one of the greatest life-saving discoveries of the 19th century.

Sublamine and Its Toxic Action Compared With That of Corrosive Sublimate.*

After reviewing the extensive literature on sublamine in hand sterilization, Schuftan expresses the belief that its use will be extended to other fields, such as to the treatment of syphilis. As its employment here will also be internal, subcutaneous, intramuscular and intravenous, it is of great importance to obtain an exact idea of the toxic action of the drug; and for this purpose, at the suggestion of Prof. Liebreich and with the assistance of Prof. Langgaard, he has made a series of experi-

* By D. I. L. Van Zandt, Ft. Worth, Tex. Abstracted from the Medical Record, Oct. 11, 1902.

* By Dr. Adolf Schuftan. Abstract from an Inaugural Dissertation, Berlin University, August 15, 1902. Gustav Schade, Berlin.



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ments to determine the relative toxicity of sublamine and sublimate.

Twenty-one experiments with rabbits weighing from 2 to 3 pounds gave the following lethal doses:

	SUBLIMATE.	SUBLAMINE.
by mouth	0.01 grm. (1-6 gr.)	0.04 grm. (3-5 gr.)
subcutaneous	0.01 " (1-6 ")	0.01 " (1-6 ")
intravenous	0.005 " (1-12 ")	0.0075 " (1-8 ")

By weight, therefore, sublamine administered per os or intravenously is less poisonous than corrosive sublimate, while subcutaneous it is equally so. Taking into consideration, however, the fact that 1.7 grams (25½ grains) of sublamine are equal in mercurial content to 1 gram (15 grains) of the bichloride, its poisonous effect subcutaneously is considerably greater, and intravenously is somewhat greater than that of sublimate.

The more vigorous action of sublamine when administered by the skin or the veins is most easily explained by its property of not coagulating albumin. Taken by mouth, this does not enter much into consideration; but by the other ways it causes a more rapid and ready absorption of the drug.

The author concludes by stating that the non-irritancy of sublamine may render it especially appropriate for syphilis, and that the painful infiltrations that occur may in this way be avoided.

In a paper on "Alcohol and Sublamine as Hard Disinfectants," from Prof. Furbringer's Division of the Friedrichshain Hospital, Berlin, (*Deutsche Medicinische Wochenschrift*, Sept. 11, 1902), Drs. *Danielsohn* and *Hess* report some comparative tests undertaken at Prof. Furbringer's request, and state as follows:

"We are compelled to endorse the claims of superiority for sublamine over sublimate. The non-irritancy of the preparation was most agreeably noticeable; the hands were not attacked in the slightest degree by this new disinfectant, while we had to suffer more or less from skin irritations after the use of sublimate. A further merit of sublamine is its considerably greater solubility, which, in practice, when speed is necessary, will be thoroughly appreciated."

The authors conclude that in the Furbringer method sublamine may be substituted with advantage for sublimate, but consider the omission of alcohol in the disinfection inadvisable, even though favorable results may be obtained without it.

Privy Councillor Prof. Furbringer, in his "Comments on the Above Treatise," adds:

"The undeniable advantages of sublamine have induced me to introduce the same—among others—as a hand disinfectant in my division."

In a brochure on "Local Anesthesia and its Application in Dentistry" (Leipsic, Arthur Felix, 1902), Dr. Hermann Thiesing, Royal Court Dentist, discusses the twelve anesthetics which have been used in stomatology. He finds that acoin, cocain, Alpha Eucain, holocain, orthoform and orthoform-new are less suited because of their greater toxicity; nirvanin, anesin, etc. because of insufficient anesthetic action and other disadvantages; and that Beta-Eucain should be employed. Dr. Thiesing has also used Wilson's anesthetic, but has entirely ceased to employ it, having become convinced that better results are obtained with a 1% Beta-Eucain solution; moreover, Wilson's anesthetic is 15 times as expensive as such a solution.

Beta-Eucain possesses greater anesthetic power than tropacocain, while the duration and intensity of the anesthesia, and the area affected by it, are equal to that of cocain. Besides being three and three-fourths less toxic than cocain, Beta-Eucain possesses the important advantage that its solutions can be sterilized with boiling water. The author has never observed oedemas or subsequent pains from the use of boiled Beta-Eucain solutions, though sometimes, just as with tropacocain, bleedings followed its employment, which, however, have always stopped promptly without aid.

Insensibility of the mucous membrane may be easily produced by the external application of a Beta-Eucain solution. The injection of 1% solution (to which eight-tenths of one per cent. sodium chloride have been added) at body temperature is absolutely painless and effects a thorough anesthesia lasting 25 to 30 minutes.

From his investigations Dr. Thiesing draws the conclusion that in dentistry only Beta-Eucain and tropacocain may be considered, and occasionally, if very dilute solutions are to be used, or for application to the unbroken skin, also acoin and cocain.

He himself prefers Beta-Eucain, because it is less toxic than tropacocain and has considerably more anesthetic power. According to the investigations made by various physicians, a 1% Beta-Eucain solution produces about the same effect as a 4% tropacocain solution. The possibility of intoxication is therefore much greater with tropacocain.

Dr. Thiesing considers it advisable to employ Beta-Eucain solutions of four different strengths for various purposes. He indicates 2.5% *Beta-Eucain solutions* for opening abscesses; excising small tumors; extracting loosened (not inflamed) teeth and roots (deciduous teeth) and the four lower incisors; and anesthetizing the nerv.

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This is due slightly to a triplicity of action.

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Unlike other drugs, it goes unchanged and unchallenged to the very citadel of disease,—the choking throat, the inflamed organs of respiration, and it soothes the excited nerves. Thus it cures colds, nasal inflammations, laryngitis, bronchitis, grippe, asthma, pneumonia and insipient consumption. Rest cure is "nature's way;" and Sander's Eucalyptol, which is unlike the common product of the eucalyptus found in the market—soothing, germ-destroying, waste-removing and vitalizing—secures rest to the inflamed parts. It is perhaps the more valuable if the chest trouble partakes of a nervous character, a condition of nervous disturbance. Safe, speedy and agreeable, it is a true invigorant to the respiratory system generally.

It should be inhaled in the following combination:

R Sander's Eucalyptol 2 drachms
Tr. iodi.

Spir. chloroformi áá ½ ounce

M—Twenty drops to a cupful of hot water each inhalation.

As an intestinal antiseptic in cholera infantum 1 drop of Sander's Eucalyptol to a teaspoonful of mist. cretæ forms a most effective prescription; in typhoid fever 10 drops of a 20 per cent. alcoholic solution of Sander's Eucalyptol in a little milk every two hours has proved very beneficial.

Applied locally to inflamed parts, ill-conditioned ulcers, septic wounds, parasitic skin diseases, etc., it exerts the same antiphlogistic and antiseptic influence. If you are not already acquainted with the remedy you should not fail to write for sample and literature to Dr. Sander, 88 Lincoln Avenue, Chicago, Ill.

An Opinion Worthy of Consideration.

My attention having first been called to Neurilla the past winter, I first began to test its benefits in two very tedious cases with very gratifying results. One of these cases refers to a young man, left with Chorea and an ill-shapen frame from Spinal Meningitis, an illness dating back some sixteen years ago. The Neurilla having produced an action whereby a more healthy tone has been given the general nervous system, the young man's disposition seems less irritable and his general inclinations more cheerful, showing a bright mental energy. The improvement became manifested to the general satisfaction of his parents.

Another case has been a lady residing on Washington Heights, where I have tried many things for her hysterical condition and nervous depression, manifesting themselves at her menstrual periods; she is forty-three years old, and her condition is due to the Menopause. She has used Neurilla, three bottles, and tells me she is delighted with the restfulness she has enjoyed, and is able to control her irritable, petulant disposition, a condition of two years' standing, unknown before taking Neurilla. This patient takes Neurilla, teaspoonful doses, four times daily. I have prescribed Neurilla in several Dysmenorrhea cases, and with very good results.

As a Nerve-calative, I shall continue to prescribe it, and shall watch with interest its beneficial results, of which I feel assured.

I wish you every success in your most excellent remedy, which should hold a high place for female Nervousness, which asserts itself particularly in general menstruation, and at a climatic period.

E. C. JONES-TAPPEN, M. D.

346 West 123rd St., N. Y. City.

How to Prevent "Substitution" on Prescriptions.

We have become familiar in the last fifteen years, with a class of manufacturing druggists, whose business mission is not to improve or create any new invention applicable to medical science, but who devote themselves almost exclusively to imitating largely prescribed preparations. This they may sometimes do successfully, but as in most cases much time has been spent in experiments and no expense is spared by the originators to maintain the standard of excellence, it is difficult for these substitutes to find a sale.

The only way this can be done successfully, is by inducing the pharmacist to dispense the cheaper substitutes on prescriptions.

In the case of Colchi-Sal capsules, which

Liquid Febrisol

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Doctor:

Read this formula, then send for sample and literature. After a trial you will be convinced that Febrisol is the best anti-pain and febrifuge ever offered the medical profession. It is as reliable as morphine; has none of the bad after effects, and is opposed to cardiac depression.

Formula:

Each fluid dram contains chemically pure

Phenacetin.....	1	Gr.
Salol.....	$\frac{1}{2}$	Gr.
Cit. Caffeine.....	$\frac{1}{2}$	Gr.
Acetanilid.....	$1\frac{1}{4}$	Gr.
Tartaric Acid.....	$\frac{1}{4}$	Gr.
Soda Bicarb.....	$1\frac{1}{2}$	Gr.

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We did it because our Syro-Bulb is as far superior to it as an arc light to a tallow candle.

The Syro-Bulb costs *us* FIVE TIMES AS MUCH as the old-style flask bulb.

But we do not charge any more for our antitoxin, put up *only* in that way, than others charge for theirs put up in the old way.

Why is the Syro-Bulb better? Because it enables the doctor to inject the serum right from its own bulb, thus avoiding risk of contamination by its transference to an unclean syringe, and saving the time incident to sterilization—the Syro-Bulb is already sterile!

Following is a representative expression of medical opinion:

I have gained better results from the use of Stearns' Antitoxin than I have secured from others. The mode of injection is as nearly perfect as it is possible for it to be made.

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Every druggist has our serums and vaccine or can get them on short notice. If physicians who find difficulty in obtaining them will advise us we will see that they are promptly supplied thereafter.

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are the most universally acknowledged remedial agent in Gout and Rheumatism, some makers of these substitutes quote them at less than the cost of manufacturing the genuine Colchi-Sal, which in itself is suspicious, in view of the fact that the value of the natural methylsalicylate (from *betula lenta*) has materially increased and that of pure crystalline colchicine used in its manufacture, is more than 600 times greater than when the formula of Colchi-Sal was first brought before the notice of the medical profession. The published formula merely indicates the basis on which it is made and does not explain manufacturing details on which the peculiar physiological effect depends.

Colchi-Sal capsules are naturally green, so that the substitution is only detected by its failure to give the full benefits to which practitioners are accustomed. In order then to obtain satisfaction, physicians should prescribe "original packages" of 50 or 100 capsules of Colchi Sal bearing the name of the agents, E. Fougere & Co., New York.

Many physicians object to this no doubt, but unless it is done, no blame can be attached to Colchi-Sal (or its published formula), which has proved so remarkably prompt to relieve pain and to stimulate the increased secretion of the solvent principle or uric acid, thus preventing further precipitation in the tissues and consequent inflammatory conditions, besides resolving tophi resulting from previous pathological phenomena.

If therefore the patient does not obtain relief after its exhibition, it is advisable to look carefully into the origin of the capsules.

A Peculiar Case.

A Mrs. M. P., of Hoboken, came to consult me about a trembling in her voice from which she had suffered for about three years, and for which she had visited many physicians without getting any benefit. After hearing the history of the case, I was led to believe that her trouble originated in the womb. After examining carefully that organ, I found the left fallopian tube filled with a liquid substance. I advised an operation which I performed, diagnosing the case to be one of a Pyosalpingitis from which she fully recovered; but the trembling in her voice still remained. Thinking the symptom to be of nervous origin, I commenced the treatment of Neurilla, and to my surprise, after the fourth bottle, her trembling had entirely disappeared and her condition in general was normal. In consequence of the excellent results attained in this case, I am inclined to believe that

Neurilla is the only preparation to be used in all diseases where the prominent symptoms are a nervous disorder—and for that purpose I recommend it heartily to my professional friends.

I. Colleti Reina, M. D.
193 2nd Ave., N. Y. City.

Excessive Proteid Diet.

It doesn't require much of an argument to show that good material must go into the twenty-story building if it is to be solid and secure.

Yet a great many people seem to think that it matters little what kind of material goes into the building of the human structure!

They offer the body thistles and ask it to give back figs.

They feed on thorns and expect to pick roses.

Later, they find they have sown indigestion and are reaping ptomaines.

It's a wonderful laboratory, this human body. But it can't prevent the formation of deadly poisons within its very being.

Indeed, the alimentary tract may be regarded as one great laboratory for the manufacture of dangerous substances. "Biliousness" is a forcible illustration of the formation and the absorption of poisons, due largely to an excessive proteid diet. The nervous symptoms of the dyspeptic are often but the physiological demonstrations of putrefactive alkaloids.

Appreciating the importance of the command, "Keep the bowels Open." The Antikamnia Chemical Company offers Laxative Antikamnia Quinine Tablets, the laxative dose of which is one or two tablets, every two or three hours, as indicated. When a cathartic is desired, administer the Laxative Antikamnia and Quinine Tablets as directed and follow with a saline draught the next morning, before breakfast. This will hasten peristaltic action and assist in removing, at once, the accumulated fecal matter.

A New Invention.

Something new, and yet old, is the use of Amber plates in a Static machine. Amber was the first product in which Electricity was found, and this because it was, and is yet the most Electric product known, yet it has never been used in Electric machines, until The Sorensen Mfg. Co. in Ravenna have started to use it this summer as revolving plates for Static Machines. Of course it is a great success, as it cannot break, and gives many times more current than any other product known.



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Complicated Anaemia.

Ruth K——, age 14, American, admitted November 14th. Diagnosis: Essential anaemia.

The patient had been sent to me by Dr. B——, who said that in spite of all treatments employed, his little patient had grown steadily worse, and the parents were well-nigh discouraged. Her condition was associated with menstrual disorders; a year previous she said her disposition seemed changed. She found she was becoming morose and despondent, at times hysterical, and suffering very much from melancholy. Her menstrual order was of the hemorrhagic form; her complexion was pallid, waxy, skin puffy without oedema; she was easily fatigued upon the least exertion; the heart was irritable: there was shortness of breath, pulse full, but soft, and at times pulsations in the peripheral veins. There was a disgust for food, imperfect indigestion and occasional attacks of gastralgia. In the right apex there was a suspicious dullness, indicating a possible incipient phthisis. Examination of the blood showed a relative decrease in quality and quantity of the hemoglobin, resulting in the blood being paler than normal. The red corpuscles were lighter in color and showed less tendency to form rouleaux; their character was changed, not being of uniform size, some normal, others small (microcytes), others usually large (macrocytes), others irregularly shaped (poikilocytes). The number of corpuscles to a cubic millimetre was about 2,500,500. The white corpuscles were considerably increased in number. A few granular bodies were present, indicating degeneration of the white corpuscles.

The patient was put to bed, secretions regulated, and a half teaspoonful of bovine was ordered every hour in peptonized milk.

On November 18th, the bovine was increased to a tablespoonful every two hours.

November 30th, the bovine was increased to a wineglassful every two hours, given in peptonized milk, alternating with old port wine. The patient at this time showed some improvement, felt stronger, slept better, digestion seemed excellent, bowels regular, and she slept throughout the night quietly.

December 10th, microscopic examination of the blood showed increased quantity and quality of hæmoglobin, and red blood cells 3,000,000 to the cubic millimetre.

December 18th, the patient had gained seven pounds in weight, color good, puffiness of skin disappeared, and she was ta-

king daily exercise in the open air without suffering fatigue.

December 24th, microscopic examination of the blood showed hæmoglobin almost normal, the red blood cells about 4,500,000 to the cubic millimetre, general condition splendid.

On December 26th, patient was discharged, cured.

The complete, thorough and rapid cure in this case was undoubtedly due to the blood treatment, for all through her course of treatment, outside of cathartics and mild heart stimulants, she took absolutely nothing but bovine. Bovine acts in anaemia in all its forms by first stimulating the blood cells to a healthy proliferation, and secondly, by properly and thoroughly supplying perfect nutrition, carries them on to a full and healthy maturity. Iron in all its forms while at first undoubtedly beneficial, can only go half way, for it simply stimulates the proliferation of the blood cells and supplies only partial nutrition, the result being that in the majority of cases where it is employed alone, many of the newly born cells, for lack of proper nutrition, atrophy, or become granular bodies.

Allouez in Diabetes Mellitus.

"Seven years ago I became afflicted with diabetes mellitus. I tried about everything that I heard of or read of, in the highest medical literature, or that any physician had ever tried, with even a hope that it was helping his patient; but for more than four years I gradually grew worse, until I excreted more than 4,000 grains of sugar daily.

In 1896, a paralytic condition set in, at the ends of the fingers and toes, and extended toward the trunk, one joint at a time, until in about two months I could just stand. Had but slight sensation in my fingers, when I came across one of your booklets. I had no faith in its claims, but that was the straw and so I, the drowning man, caught at it. In less than three months after beginning to use Allouez the amount of sugar was to 200 grains per day and occasionally a sample would show no trace of sugar.

There can be no doubt that in a few months more, without the water, this condition would have reached the vital organs. I can truly say that Allouez Magnesia Water has rescued me from certain death. Many patients have used the water on my prescription, and in some cases all traces of sugar have disappeared in from one to three months.

W. C. GLIDDEN, M.D.

De Calb, Ill.

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The Dr. Deimel Underwear of POROUS LINEN is the correct garment for the skin. It gives tone and vigor to it. Under it the skin becomes strong and active, capable of protecting the body against chills and internal congestions.

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NEW ORLEANS POLYCLINIC.—Sixteenth annual session opens November 2, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address NEW ORLEANS POLYCLINIC, POSTOFFICE BOX 797, NEW ORLEANS, LA.

Dr. J. T. Wesley, of Middleburg, Ky., says: I am well pleased with Neurilla and have had my druggist order it as I have prescribed it in several cases with satisfactory results.

The Therapeutic Value of Pepto-Mangan (Gude)*

The medicinal use of iron dates back to a remote period, and since ancient times ferruginous medication has played an important part in the treatment of anæmic conditions.

Since it has become known through clinical observation and investigation that iron introduced into the organism exerts a favorable influence upon pathological states of the blood, and that in anæmia and chlorosis, as well as in other anæmic conditions, it causes an increase of the number of red blood cells and of the percentage of hæmoglobin, chalybeate medication has attained the importance of being almost a specific in this class of disorders.

The field of indications for the medicinal use of iron is quite extensive, for, aside from anæmia and chlorosis, it is called for in all diseases in which anæmic conditions occur either during their course or as their sequel—in short, in all cases in which, through some pathological state or another, the integrity of the blood is affected and impaired in a greater or less degree. To this group belong, first, the large number of constitutional affections, especially scrofula and rachitis; second, tuberculosis in certain stages of its development; third, certain nervous disorders which are commonly attended with anæmia, such as neurasthenia and hysteria; fourth, all conditions of weakness and exhaustion following severe acute febrile diseases or appearing during the period of convalescence from other serious disease; and, finally, the anæmias arising in the course of chronic and wasting disease.

The chalybeates comprise a quite considerable number, all of which are intended to fulfill the therapeutic aim of supplying the lack of iron which is the source of the anæmic condition, of bringing about an improvement of the pathological state of the blood, and of promoting blood formation in a normal manner. Although at the present time we are still imperfectly informed as to the primary causes of anæmia and chlorosis, and do not as yet possess a clear insight into the inner workings of the pathological process, it must, nevertheless, be considered as demonstrated that the deficiency of iron in the body has its origin in certain functional anomalies of the blood-forming or blood-conserving organs, and that it is the result either of pathological degeneration or of a lessened production by them. Conformably to the casual indication, the aim of treatment in these diseases is, therefore, to replace the deficiency of

iron, which plays so important a part in the human economy, as completely as possible, and this can only be brought about by the introduction of sufficient quantities of ferruginous medicaments in an absorbable form.

According to recent and thorough studies of this subject we have to deal in anæmia and chlorosis, as well as in other anæmic forms of disease, besides the loss of iron, with a marked diminution of the manganese, which, like iron, is not an unimportant constituent of the blood, and for this reason an adequate equivalent appears necessary.

The number of ferruginous preparations at our disposal is much larger than in the case of any other medicaments, and almost daily we have an opportunity of acquainting ourselves with new remedies of this kind, so that, in view of the actual overflowing of the pharmaceutical market at the present time, it is not easy to find our way and to always make the proper choice. A glance at the large series of preparations which during recent times have been either newly discovered or introduced in an improved or altered form, gives us an approximate idea of the new paths and aims followed in modern medication. Our widened knowledge of the physiological action of remedies, and the constant striving of chemists to produce drugs of the greatest possible specific nature, have enriched the materia medica with very valuable acquisitions which permit of a method of use corresponding to the requirements and more convenient for the patient.

It can be easily understood that the medical profession gives its full attention to any improvements in this domain, and especially in regard to the important criterion that the preparation under consideration must be of such character that is easily absorbed, and hence can be utilized by the organism.

We are led more and more to recognize the fact [and this subject I have discussed in detail in a former contribution] that inorganic iron, owing to its slight absorbability and assimilability, as well as its difficult digestibility and its irritating action upon the mucous membrane of the digestive tract, is not at all adapted for the rational treatment of the forms of disease considered here, and that only iron of organic character which approximates in its composition to the iron present in our foods presents those advantages in improving the quality of the blood which conform most closely to the demands of a logical and successful therapy. In this connection I must refer to the view of Bunge, which nowadays is shared by nearly all clinicians and pharmacologists, that iron introduced in the

*Dr. J. W. Frieser, Vienna, Austria.

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—IS—

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inorganic form is either not at all absorbed by the intact mucous membrane of the gastro-intestinal tract, or only in minimum and therefore in inadequate amounts, and hence cannot be utilized for the formation of blood. Owing to this theory, which is forcing its way more and more to the front and is being accepted by many of the most vigorous adherents of the old iron therapy, the efforts of chemists have been more and more directed toward replacing the inorganic preparations of iron by easily assimilable and absorbable combinations, and from these have resulted iron albuminates and iron peptonates, which, on account of their superior properties, have steadily gained in popularity. That, in spite of the existing indication and the demonstrated favorable influence of iron in the above-mentioned diseases, the results of ferruginous medication are occasionally uncertain and imperfect is, in my opinion, due to the frequently incorrect choice of the preparation employed and to the routine method of administration.

Hence, in judging a ferruginous preparation, we must decide the important question as to what should be the requirements of a useful and efficient chalybeate in every direction if all demands are to be met in a scientific and practical manner. Above all, such a preparation must be capable in a high degree of absorption and assimilation, must be digestible, easily borne, palatable, and must not in any manner exert disturbing by-effects upon the functions of the organism.

According to my extensive observations, these postulates are fulfilled in a satisfactory manner by Pepto-Mangan (Gude). I have had frequent opportunities, in a considerable number of cases (42) in which the preparation was employed with success, to acquaint myself with its therapeutic value and its beneficial medicinal properties.

In the administration of Pepto-Mangan to anæmic and chlorotic patients I have been able to make the positive observation that under its use the constitution of the blood underwent a very satisfactory and sometimes remarkable improvement, often after a comparatively short period of treatment. The examination of the blood frequently showed a rapid increase of the number of red blood cells and of the percentage of hemoglobin, this being attended by a marked improvement of the general health and an increase of strength. Its advantageous chemical composition and its excellent medicinal properties, such as easy assimilability, high absorption and assimilation power, and the absence of any deleterious or disturbing by-effect, illustrate

particularly the advantages of this remedy, whose efficiency is evident in most cases.

A glance at the physical character and composition of the preparation will easily enable us to form a correct idea of its value.

Pepto-Mangan contains iron and manganese combined with peptone in the proper proportions and in a readily digestible and absorbable form, so that the preparation can be completely utilized by the organism. As is well known, the peptones represent artificial predigested products which when taken into the organisms make no special demands upon the digestive functions, which in anæmic and chlorotic persons are usually weakened and impaired in action. This fact is the more important, since in these cases the digestive process and the secretion of gastric juice is usually reduced, in consequence of which the nutrition is quite impaired, while frequently there is a condition of hyperacidity of the gastric juice. It has been most gratifying to me to observe that during the use of Pepto-Mangan, which experience has taught me is particularly adapted in these maladies, it does not interfere with or exert any disturbing effect upon the digestion. On the contrary, under its administration the appetite and the digestion are stimulated in a very satisfactory manner.

As a rule, during treatment with Pepto-Mangan the improvement in the constitution of the blood, as shown by physical examination, was accompanied by a beneficial effect upon the general condition and strength. The appearance and appetite of the patients improved visibly; the digestion and nutrition progressed favorably, and the patient felt better, happier, and more vigorous. Disturbances of the gastro-intestinal tract, such as pressure or pain over the stomach, nausea, a disagreeable feeling of fullness, a diminution of appetite, constipation, congestions, etc., which are so frequent during the administration of other iron preparations, especially those of inorganic character, were scarcely ever observed during the use of Pepto-Mangan (Gude). On the contrary, in those cases in which there is a tendency to constipation and a marked atony of the gastric functions my experience has led me to regard this remedy as especially useful and effective. Under its administration the functions of the intestines, especially the peristalsis, are often stimulated in a remarkable manner, and the existing constipation yields to a regular condition of the bowels.

It seems to me particularly noteworthy that often, even after a brief use of Pepto-Mangan, the anæmic appearances, especially the often marked apathy, lassitude, and drowsiness, the palpitations of the

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heart, and headache, disappeared in a very satisfactory manner, and that even in those patients who suffered from insomnia frequently a good refreshing sleep occurred. Even in those instances in which a variety of other ferruginous preparations had proved unavailable the prolonged use of Gude's Pepto-Mangan often gave very gratifying results, so that occasionally a manifest and positive cure occurred after four to six weeks' treatment.

Aside from the primary anæmia and chlorosis, the preparation produced beneficial effects in all those diseases which are apt to be attended with or followed by anemic conditions of various kinds and degrees. As a rule, its action in scrofula and rachitis was excellent, and no less favorable in the incipient stages of tuberculosis in which anæmic phenomena are frequently observed. Furthermore, it proved of value in conditions of debility, during convalescence from acute febrile and exhausting diseases (pneumonia, typhoid, and other infectious diseases), and finally in those chronic wasting maladies often accompanied by anæmic states, such as tuberculosis, malaria, protracted gastro-intestinal catarrhs, and chronic dyspepsias, in all of which the administration of a strengthening and tonic remedy appears indicated.

An especially advantageous influence is exhibited by Pepto-Mangan in the case of weakly, anæmic, and ill-nourished children as well as in anæmic women. In these cases its use often proves most serviceable, so that I have learned to award it the preference and prescribe it usually with excellent results.

Particularly striking was the success of treatment with Pepto-Mangan in three cases of very severe chlorosis and in two cases of marked acute anæmia following considerable losses of blood. In a comparatively short period of administration (five weeks) a most remarkable improvement, both of the general state and the appearance of the patient, as well as of the condition of the blood (rapid increase of the number of red blood cells and percentage of hemoglobin), took place. I cannot refrain from mentioning that in several cases in which the administration of iron appeared contraindicated owing to marked digestive disturbances or to an acute febrile state, Pepto Mangan was prescribed by me without any drawbacks, but rather with eminently satisfactory results.

According to all these observations in my practice, which are completely confirmed by many favorable reports from other sources, I would regard Pepto-Mangan (Gude) as an excellent and effective remedy, which is entitled to a prominent place

among the iron preparations at present at our disposal.

While characterized by a high degree of absorbability and assimilability, being easily digested and well borne, this remedy is free from any deleterious properties, is willingly taken by the most capricious patients, and is uniformly well tolerated. The fluid form and pleasant taste of the preparation render its administration convenient and agreeable for the patient, and, as must be particularly emphasized, the remedy, even when administered for months, does not excite the least aversion, an advantage which certainly is not to be underestimated. A review of those cases which were particularly benefited by Pepto-Mangan would be best calculated to demonstrate its high therapeutic value, but must be omitted here in order that the present article might not become too voluminous.

In view of the recognized advantages of the preparation and the favorable results obtained with it, it should be estimated as a very valuable acquisition to the materia medica, and can be warmly recommended for extensive use in the treatment of anæmic conditions and chlorosis.

It is my custom to direct that Pepto-Mangan be taken in these cases to the exclusion of other treatment, and only in combination with appropriate dietetic measures, for periods of several weeks, and if necessary, longer, three to four months. For adults I prescribe three tablespoonfuls daily, for children three teaspoonfuls daily, in water or some white wine. During the entire time of administration I prohibit the use of raw fruit, acid or highly-spiced dishes, and order a vigorous and regulated diet. In severe cases of anemia and chlorosis I recommend rest in bed for some time, and if possible have the patient placed in a well-ventilated sitting-room; while in the lighter cases I order, besides the medicinal treatment, a frequent sojourn in the open air, and if possible a prolonged stay in the country in a carefully selected place, and short and non-fatiguing walks.

In some instances I have observed excellent results from a rest cure in conjunction with ferruginous medication and appropriate hygienic and dietetic treatment.

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Rudolph Ludwig Virchow---His Generic Theory Regarding Cell Life---Applicable to Clinical Medicine of To-Day.

By the death of Rudolph Ludwig Virchow the world lost one whose career is a mile-stone in the path of scientific medicine. His early life and work was that of a scientific revolutionist. The impregnable fallacies of tissue construction were swept away by the formidable argument which is now to become his greatest monument:—*Omnis cellula et cellula*. To this noted observer are accredited those theories and facts which formed the basis for cellular pathology. Virchow personally claimed no recognition for his research work in cytology. He disclaimed all title to originality in this new field, holding that only as an observer was he first to comprehend the pathologic importance of the individual cell.

In 1842 he advanced the view that the characteristic leucocytes of acute inflammation were the direct result of multiplication of connective-tissue corpuscles. This theory incited dispute and stimulated investigation. Addison and Waller contended that white corpuscles passed directly through the wall of a blood vessel. Discussion and research went hand in hand, swinging on the pivot point of the cell, *per se*. Cohnheim definitely proved the identity of the white corpuscles and while overthrowing the theory advanced by Virchow, acknowledged that the fallacy of the great observer's original contention was the basis of all future work.

Conclusions deemed adequate to explain the various changes of inflammation were condemned. The cell became the object of critical study. Its histologic relationship to the human economy incited physiologist to undertake experimental work. Pathologists pursued to completeness the study of that intimate association between cell production and morbid growths. From these several lines of thought evolved the conception that the health of the human organism, as a unit, depended on the stability of cell life.

The chemico-biologic activity of the cell is explanatory of the value certain medicinal substances possess in the adjustment of disturbance due to inflammation. There exists an affinity in cellular tissue for hydroscopic fluids. Based on this known property of selectiveness the curative power of a drug must be estimated. Ehrlich's theory of "lateral chains" establishes the preference of the cell for toxines and the converse is equally true. That which is chemically compatible with the construction of the cell body ultimately forms a component part. The selective affinity for food, physical property of locomotion and

constant presence in inflammation determined the necessity of adapting the curative treatment to environment of the life of the cell.

To the general practitioner has been allotted the task of demonstrating the clinical value of all laboratory research. To him belongs the field of clinical medicine. Through his efforts in every-day practice the useful knowledge of the pathologist finds its way to the patient. Thus the patient unwittingly becomes the exponent of convincing truth.

Virchow gave birth to a theory which determined itself into indisputable fact. In direct scientific application to principle Antiphlogistine was constructed. The immediate factor essential for success was the reduction of inflammation. This Antiphlogistine does through the physical process of osmosis. Relief from pain occurs on diminished pressure of the congested tissue. Through the admixture of bland antiseptics the chemical irritation of the nerve ends is neutralized. In every way, chemical, physical and medicinal, Antiphlogistine re-establishes the stability of cell life, by acting upon and dispersing the mass of extravasated fluid. Absorption rapidly takes place through the relieved lymphatics. Antiphlogistine is the only medium to impart recuperative energy to inflamed tissues.

The fifteenth annual meeting of the American Association of Orificial Surgeons will be held in Chicago, September 10th and 11th, 1902. A program is being made up of lectures and papers by the leading specialists and practitioners in rectal, genito-urinary and gynecological work, and in the treatment of all chronic diseases. The orificial surgeons are the workers in the great field of the reflexes and the profession generally is every day being brought closer to a realization of the fact that the reflexes play a most important part in the chronic manifestations of disease. Papers and discussions will cover the entire scope of the work, preparatory, operative and therapeutic, and the sessions will be of great benefit to all who attend. H. C. Aldrich, M. D., of Minneapolis, Minn., President. Ralph St. J. Perry, M. D., Secretary, Farmington, Minn.

NEW ORLEANS POLYCLINIC.—Sixteenth annual session opens November 2, 1902, and closes May 30, 1903. Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory work. For further information address NEW ORLEANS POLYCLINIC, POSTOFFICE BOX 797, NEW ORLEANS, LA.

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The Syro-Bulb can be used in less than a minute; the old way requires twenty times as long.

The Syro-Bulb costs nothing extra; the old style way necessitates an outlay for a serum syringe and its occasional renewal.

The Syro-Bulb has many advantages over the old-style way of administering antitoxin; but the old-style way has not even one over the Syro-Bulb.

Stearns' Diphtheritic Antitoxin is prepared under the strictest scientific precautions in our new and modern biologic laboratories. Its purity is positively guaranteed and no ill effects have ever followed its use.

Physicians everywhere speak of it in the highest praise. We do not believe it has an equal; it cannot have a superior. Every druggist has our product, or can get it on short notice. If physicians who find difficulty in obtaining it will advise us we will see that they are promptly supplied thereafter.

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"Stenosine" (Di-sodic Methylarsinate.)

The arsenical (mineral) preparation used in therapeutics hitherto, always have been dangerous and difficult to employ, on account of their toxic properties and intolerance.

Organic arsenical preparations however, seem to be free from these inconveniences and on this account, the cacodylates have been largely used in recent years, although they also have certain defects, such as the fatigue they occasion in the stomach and production of disagreeable garlic-like eructations.

In order to obviate these annoyances, M. Armand Gauthier the well known authority on medico-chemical questions, has investigated the physiological properties of the di-sodic methylarsinate. $\text{AsCH}_3\text{O}_3\text{Na}_2 \cdot 2\text{H}_2\text{O}$, discovered by Baeyer.

This drug taken internally, does not produce gastritis, dyspepsia nor garlic-like eructations and fetid breath, and is a powerful remedial agent which has a number of useful applications.

Its effects in paludal fevers have been most remarkable. At Constantine (Algeria), Dr. Billet has used it with great success in a number of cases of intermittent fever, of quotidian and pernicious type, which did not yield to quinine even in heroic doses.

All these patients were cured with this new agent, and the bacteriological examination of the blood, forty-eight hours after commencing treatment, proved its real efficacy.

Di-sodic methylarsinate increases the appetite and strength, while the number of red blood corpuscles are augmented. (*Acad. des Sciences, 10 fevrier, 1902.*)

In tuberculosis, its effects are not less remarkable; the tolerance is perfect, all patients can take it, whereas the cacodylates cannot be retained by some persons.

According to Armand Gauthier (*Bull. Med.*) di-sodic methylarsinate stimulates the strength of patients and rapidly increases the appetite, which in itself is an indication of more complete assimilation and renewal of tissue, also confirmed, by the increase of body weight.

In anemia, weakly, chlorotic, nervous and fever patients, as well as in those suffering from cachexia, diabetes, etc., the respiratory exchanges become normal and more active.

All these considerations, joined to the non-toxic property of this arsenical salt, tend to prove that "STENOSINE" (di-sodic methylarsinate) has a great future before it in the treatment of disease.

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adenopathy, anemia, leucemia, asthma, grippe, bronchitis, emphysema, tuberculosis, etc.

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One to five capsules daily, to be taken at meals.

So-Called "Christian Science."

While it is totally incomprehensible to the practical, hard-headed, common-sense individual that any one should pursue such an intangible chimera as "Christian Science" with such sublime faith as to depend upon it in the presence of serious bodily illness, certain it is that the disciples of this vicious religious monomania are increasing in number and temporal power, and that it is no longer safe to entirely ignore it as a menace to the health and well-being of the community. Both the medical and secular press have devoted considerable attention to the subject, largely in the way of ridicule, but the most powerful, logical and altogether unanswerable argument we have yet seen is comprised of a series of short lectures by Rev. Andrew F. Underhill, of St. John's Episcopal Church, Yonkers, N. Y., entitled "Valid Objections to So-Called Christian Science." Realizing that their interests are identical with those of the medical profession, and that the enemy of one is the enemy of both, The Arlington Chemical Co. is anxious to do its part in relegating this absurd cult to the limbo of oblivion, where it may rest peacefully side by side with the many foolish fads that have preceded it.

Appreciating the force of the argument referred to, and being convinced that it will place in the hands of the physician a well-forged weapon wherewith to combat such a subtle and dangerous enemy, The Arlington Chemical Co. has obtained the permission of the author to reprint these lectures in booklet form and distribute them to physicians. If any of our readers have been overlooked in the mailing, a request to the above Company will bring a copy.

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Membranous Complications---(Throat, Bronchii and Lungs.)

Under the above heading we find the following by Walter M. Fleming, A. M., M. D., New York City, in the September number of *The Medical Era*: "With all the experience of more than a quarter of a century, in the treatment of winter-cough, and its complications of laryngeal, bronchial and pulmonary irritability, also dyspnoea, asthmatic spasms, and finally whooping cough—usually the most persistent and tenacious of all of these membranous maladies—I find no one remedy more strongly indicated, or which yields more prompt and satisfactory results than antikamnia and heroin tablets, composed of antikamnia 5 grains and heroin hydrochloride 1-12 grain. The purpose of this combination is manifest at once, for it provides primarily, a respiratory stimulant; secondly, a soothing sedative to the irritable mucous membrane, and thirdly, an antipyretic and analgesic. Result: A prompt and efficient expectorant, which at once relaxes the harsh and rasping cough, and releases the tenacious, sticky and gelatinous mucous, while its soothing influence is at once manifested, greatly to the comfort and contentment of the patient."

Protected Ethpharmal Medicines.

I have no use whatever for any form of *patented* medicine. In the use of crude materials many vexatious things are encountered, if these can be eliminated much has been accomplished, and an excuse found for the use of protected ethpharmal medicines. So far as my experience goes it is a real advantage to the profession; it enables us to procure in a certain fixed form certain drug effects, and that is what we want. I think pharmacy has reached so high a standard by our best pharmaceutical chemists that the real drug effect is thoroughly brought out. I procured about a month ago an eight ounce vial of Sanmetto. I am perfectly familiar and for years have known the drugs and drug effects of the remedies said to be contained in Sanmetto. The announced composition, freely made known to the profession, has made amends for the name; protected or not as the case may chance to be. I use it for all kinds of irritation of the urinary tract. The sample is exactly what we get in the eight ounce bottle in our drug houses in this place, and I know it, so am willing to order a full size bottle, eight ounces, as any other amount. L. G. ARMSTRONG, M. D.

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Sanmetto in Cystitis, Urethritis, Prostatitis and General Inflammation of the Genito-Urinary Tract.

I am an earnest friend of Sanmetto. It is a valuable and ethical preparation. From years of experience in its use I have learned to rely upon it in cases of cystitis, urethritis, prostatitis and general inflammation of the genito-urinary tract. In cases where its use is indicated its curative properties are most remarkable. I am satisfied if the profession will carefully discriminate in their cases they will always be well pleased with the results obtained from the exhibition of Sanmetto. I shall continue its use where indicated.

W. E. J. MICHELET, M. D.

Chicago, Ill.

Hypertrophied Prostate with Difficult Micturition.

For an old gentleman, seventy-four years of age, who was suffering from hypertrophied prostate with difficult micturition, I prescribed Sanmetto. The results were favorable, and after taking two bottles of Sanmetto he was so much improved as not to require the use of the catheter, which he had been compelled to use for several months previous at least once in twenty-four hours. I have since prescribed Sanmetto in five similar cases with equally good results. E. C. CULBERTSON, M.D.

Keith, Ohio.

Increase of Appetite.

Peptenzyme is a physiological remedy which possesses the valuable property of assisting the digestive organs to resume their functions. After having taken peptenzyme for a few days, the increase of appetite and the ability to digest food are very perceptible.—*The Monthly Cyclopedia of Practical Medicine*.

In the supplement to the *Journal of Tuberculosis* the whole subject of Tuberculosis is covered by a series of articles written by Dr. Carl Von Ruck. For controlling the cough of Pleurisy, one of the complications of Phthisis. The doctor says (Jan. 1902, page 101) "Cough must be allayed by heroin, codeine or even morphine, the choice being in the order named, but only when required on account of severe pain. I have also employed papine, which has given me very satisfactory results and which possesses the very desirable advantage of not causing constipation."

After the removal of alcohol, Celerina, given in doses of from one-half to one ounce every four hours, is speedily followed by the most characteristic symptoms of improvement.

